

# STORMWATER POLLUTION PREVENTION PLAN

For

## PANOCHÉ VALLEY SOLAR PROJECT

*C-RPT-000-001*

**RISK LEVEL**   1  

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### **SWPPP Prepared by:**



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Mr. Lester Crigler, PE, QSD

### **SWPPP Preparation Date**

September 16, 2015

### **Estimated Project Dates:**

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Start of Construction:  
Oct 2015

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Completion of Construction:  
Jan 2017

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# Qualified SWPPP Developer

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## Approval and Certification of the Stormwater Pollution Prevention Plan

Project Name:

*Panoche Valley Solar*

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Project Number/ID

*AMEC Project # 176055*

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“This Stormwater Pollution Prevention Plan and Attachments were prepared under my direction to meet the requirements of the California Construction General Permit (SWRCB Orders No. 2009-009-DWQ as amended by Order 2010-0014-DWQ). I certify that I am a Qualified SWPPP Developer in good standing as of the date signed below.”

---

*QSD Signature*

Lester E. Crigler

---

*QSD Name*

Amec Foster Wheeler

Sr. Civil Engineering Specialist

---

*Title and Affiliation*

Gene.crigler@amecfw.com

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*Email*

---

*Date*

23580

---

*QSD Certificate Number*

770-688-2602

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*Telephone Number*

## Approval and Certification of the Stormwater Pollution Prevention Plan

# Panoche Valley Solar

AMEC Project# 176055

Mark Noyes

Legally Responsible Person

---

Date

(914) 419-6701

Telephone Number

# Amendment Log

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Project Name: Panoche Valley Solar

Project Number/ID AMEC Project #176055

Amendment No.	Date	Brief Description of Amendment, include section and page number	Prepared and Approved By
			Name: QSD#
			Name: QSD#
			Name: QSD#
			Name: QSD#
			Name: QSD#
			Name: QSD#
			Name: QSD#
			Name: QSD#
			Name: QSD#
			Name: QSD#
			Name: QSD#

# Section 1 SWPPP Requirements

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## 1.1 INTRODUCTION

The Panoche Valley Solar project comprises approximately 6,291 acres and is located at Panoche Valley in San Benito County, California. The property is owned by Panoche Valley Solar LLC and is being developed by Panoche Valley Solar LLC. The project location is shown on the Site Maps in Appendix B.

This Stormwater Pollution Prevention Plan (SWPPP) is designed to comply with California's General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (General Permit) Order No. 2009-0009-DWQ as amended by Order No. 2010-0014-DWQ (NPDES No. CAS000002) issued by the State Water Resources Control Board (State Water Board). This SWPPP has been prepared following the SWPPP Template provided on the California Stormwater Quality Association Stormwater *Best Management Practice Handbook Portal: Construction* (CASQA, 2010). In accordance with the General Permit, Section XIV, this SWPPP is designed to address the following:

- Pollutants and their sources, including sources of sediment associated with construction, construction site erosion and other activities associated with construction activity are controlled;
- Where not otherwise required to be under a Regional Water Quality Control Board (Regional Water Board) permit, all non-stormwater discharges are identified and either eliminated, controlled, or treated;
- Site BMPs are effective and result in the reduction or elimination of pollutants in stormwater discharges and authorized non-stormwater discharges from construction activity to the Best Available Technology/Best Control Technology (BAT/BCT) standard;
- Calculations and design details as well as BMP controls are complete and correct, Appendix A.
- Provide stabilization BMPs and post construction BMPs which are detailed in Section 3.2.

## 1.2 PERMIT REGISTRATION DOCUMENTS

Required Permit Registration Documents (PRDs) will be submitted to the State Water Board via the Stormwater Multi Application and Report Tracking System (SMARTS) by the Legally Responsible Person (LRP), or authorized personnel (i.e., Approved Signatory) under the direction of the LRP. The project-specific PRDs include:

1. Notice of Intent (NOI);
2. Risk Assessment (Construction Site Sediment and Receiving Water Risk Determination);
3. Site Map;
4. Annual Fee;
5. Signed Certification Statement (LRP Certification is provided electronically with SMARTS PRD submittal); and
6. SWPPP.
7. Post-construction water balance calculator.

Site Maps can be found in Appendix B. A copy of the submitted PRDs will also be kept in Appendix C along with the Waste Discharge Identification (WDID) confirmation.

### **1.3 SWPPP AVAILABILITY AND IMPLEMENTATION**

The discharger will make the SWPPP available at the construction site during working hours (see Section 7.5 for working hours) while construction is occurring and will be made available upon request by a State or Municipal inspector. When the original SWPPP is retained by a crewmember in a construction vehicle and is not currently at the construction site, current copies of the BMPs and map/drawing will be left with the field crew and the original SWPPP will be made available via a request by radio/telephone. (CGP Section XIV.C)

The SWPPP will be implemented concurrently with the start of ground disturbing activities.

### **1.4 SWPPP AMENDMENTS**

The SWPPP will be revised when:

- If there is a General Permit violation.
- When there is a reduction or increase in total disturbed acreage (General Permit Section II Part C).
- BMPs do not meet the objectives of reducing or eliminating pollutants in stormwater discharges.

Additionally, the SWPPP will be amended when:

- There is a change in construction or operations which may affect the discharge of pollutants to surface waters, groundwater(s), or a municipal separate storm sewer system (MS4);
- When there is a change in the project duration that changes the project's risk level; or
- When deemed necessary by the QSD. The QSD has determined that the changes listed in Table 1.1 can be field determined by the QSP. All other changes will be made by the QSD as formal amendments to the SWPPP.

The following items will be included in each amendment:

- Who requested the amendment;
- The location of proposed change;
- The reason for change;
- The original BMP proposed, if any; and
- The new BMP proposed.

Amendment will be logged at the front of the SWPPP and certification kept in Appendix D. The SWPPP text will be revised replaced, and/or hand annotated as necessary to properly convey the amendment. SWPPP amendments must be made by a QSD. The following changes have been designated by the QSD as "to be field determined" and constitute minor changes that the QSP may implement based on field conditions.



**Table 1.1 List of Changes to be Field Determined**

<b>Candidate changes for field location or determination by QSP<sup>(1)</sup></b>	<b>Check changes that can be field located or field determined by QSP</b>
Increase quantity of an Erosion or Sediment Control Measure	✓
Relocate/Add stockpiles or stored materials	✓
Relocate or add toilets	✓
Relocate vehicle storage and/or fueling locations	✓
Relocate areas for waste storage	✓
Relocate water storage and/or water transfer location	✓
Changes to access points (entrance/exits)	✓
Change type of Erosion or Sediment Control Measure	
Changes to location of erosion or sediment control	✓
Minor changes to schedule or phases	✓
Changes in construction materials	✓
<i>(1) Any field changes not identified for field location or field determination by QSP must be approved by QSD</i>	

## 1.5 RETENTION OF RECORDS

Paper or electronic records of documents required by this SWPPP will be retained for a minimum of three years from the date generated or date submitted, whichever is later, for the following items:

- Notice of Intent (NOI)
- Risk Assessment (Construction Site Sediment and Receiving Water Risk Determination)
- Site Map and Other Drawings Related to SWPPP
- Annual Fee Receipts
- Signed Certification Statement
- SWPPP
- Records of all visual monitoring inspections.
- Annual Reports

These records will be available at the Site until construction is complete. Records assisting in the determination of compliance with the General Permit will be made available within a reasonable time, to the Regional Water Board, State Water Board or U.S. Environmental Protection Agency (EPA) upon request. Requests by the Regional Water Board for retention of records for a period longer than three years will be adhered to.

## **1.6 REQUIRED NON-COMPLIANCE REPORTING**

If a discharge violation occurs the QSP will immediately notify the LRP and the LRP will file a violation report electronically to the Regional Water Board within 30 days of identification of non-compliance using SMARTS. Corrective measures will be implemented immediately following the discharge or written notice of non-compliance from the Regional Water Board. Discharges and corrective actions will be documented on the NAL/NEL Exceedance Site Evaluation Report Form in CSMP Attachment 3 “Example Forms.”

The report to the LRP and to the Regional Water Board will contain the following items:

- The date, time, location, nature of operation and type of unauthorized discharge.
- The cause or nature of the notice or order.
- The control measures (BMPs) deployed before the discharge event, or prior to receiving notice or order.

The date of deployment and type of control measures (BMPs) deployed after the discharge event, or after receiving the notice or order, including additional measures installed or planned to reduce or prevent re-occurrence.

## **1.7 ANNUAL REPORT**

The General Permit requires that permittees prepare, certify, and electronically submit an Annual Report no later than September 1<sup>st</sup> of each year. Reporting requirements are identified in Section XVI of the General Permit. Annual reports will be filed in SMARTS and in accordance with information required by the on-line forms. Annual reports will include

## **1.8 CHANGES TO PERMIT COVERAGE**

The General Permit allows for the reduction or increase of the total acreage covered under the General Permit when: a portion of the project is complete and/or conditions for termination of coverage have been met; when ownership of a portion of the project is purchased by a different entity; or when new acreage is added to the project.

Modified PRDs will be filed electronically within 30 days of a reduction or increase in total disturbed area if a change in permit covered acreage is to be sought. The SWPPP will be modified appropriately, will be logged at the front of the SWPPP and certification of SWPPP amendments are to be kept in Appendix D. Updated PRDs submitted electronically via SMARTS can be found in Appendix E.

## **1.9 NOTICE OF TERMINATION**

A Notice of Termination (NOT) must be submitted electronically by the LRP via SMARTS to terminate coverage under the General Permit. The NOT must include a final Site Map and representative photographs of the project site that demonstrate final stabilization has been achieved. The NOT will be submitted within 90 days of meeting all General Permit requirements for termination and final stabilization. The Regional Water Board will consider a construction site complete when the conditions of the General Permit, Section II.D have been met. Final stabilization BMPs as shown in Table 3.1 and detailed in Section 3.4.

## Section 2 Project Information

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### 2.1 PROJECT AND SITE DESCRIPTION

#### 2.1.1 Site Description

The Panoche Valley Solar project site area comprises approximately 6,291 acres and is located at Panoche Valley, in San Benito County, California. Approximately 2,524 acres of the overall site will be developed into a Photovoltaic Power Plant. Conservation areas consisting of approximately 3,767 acres is also included in the overall site. The project site is located approximately 20 miles West of Interstate-5 (Exit 379), along Little Panoche Road. The project site is located near the convergence of Las Aquilas Creek and Panoche Creek. The project is located at Latitude 36°37'01"N and Longitude 120°52'36" W and is identified on the Site Map in Appendix B.

#### 2.1.2 Existing Conditions

As of the initial date of this SWPPP, the project site is undeveloped and is currently an active pasture for livestock. Historic sources of contamination potential include Fecal coliform from the existing livestock onsite, but other than that potential, there are no known historic sources of contamination at the site.

#### 2.1.3 Existing Drainage

The project site is relatively level at the bottom of the valley with slopes encircling the valley. The elevation of the project site ranges from 1250 to 1480 feet above mean sea level (msl). Surface drainage at the site currently flows to Panoche Valley from all directions, towards Las Aquilas Creek and Panoche Creek. Stormwater is conveyed through surface runoff. Stormwater discharges from the site are considered direct discharges, as defined by the State Water Board into Las Aquilas and Panoche Creeks upstream of Griswold Creek. Existing site topography, drainage patterns, and stormwater conveyance systems are shown on the Pre-Development Hydrology Plan, Drawing No. D-000-C-0201.

The project discharges to Las Aquilas and Panoche Creek upstream of Griswold Creek which are not listed for water quality impairment on the most recent 303(d)-list.

#### 2.1.4 Geology and Groundwater

The site is underlain by shallow alluvium underlain by Quaternary non-marine terrace deposits and Plio-Pleistocene non-marine sediments. Groundwater occurs beneath the site at approximately 30-100 feet below ground surface. The groundwater gradient is northwest to southeast.

#### 2.1.5 Project Description

Project grading will occur on approximately 500 acres of the project, which comprises approximately 7.95 percent of the total area. The limits of grading are shown on the Grading, Drainage and Sediment/Erosion Control Plans, Drawing No. D-000-C-0011 through D-000-C-0026 in Appendix B. Grading will include both cut and fill activities, with the total graded material estimated to be 330,000 cubic yards. Approximately 15,000 cubic yards of select fill material will be imported during trenching activities. Graded materials are expected to be balanced onsite. Soil will be stockpiled as indicated on the drawings shown in Appendix B. Construction activities will not be phased.

### 2.1.6 Developed Condition

Post construction surface drainage will be directed to the existing creeks as surface flow through stormwater conveyance systems and sheet flow. The overall project site will then discharge through Panoche Creek.

Post construction drainage patterns and conveyance systems are presented on Grading, Drainage and Sediment/Erosion Control Plans, Drawing No. D-000-C-0011 through D-000-C-0026 in Appendix B. The details are also discussed in section 3.4 of this SWPPP.

**Table 2.1 Construction Site Estimates**

Construction site area (Construction Limits)	2,524	acres
Percent impervious before construction	0.29	%
Runoff Curve Number before construction	74.6	
Percent impervious after construction	2.47	%
Runoff Curve Number after construction	75.1	

## 2.2 PERMITS AND GOVERNING DOCUMENTS

In addition to the General Permit, the following documents have been taken into account while preparing this SWPPP

- Regional Water Board requirements
- Contract Documents
- Air Quality Regulations and Permits
- Federal Endangered Species Act
- National Historic Preservation Act/Requirements of the State Historic Preservation Office
- State of California Endangered Species Act
- Clean Water Act Section 401 Water Quality Certifications and 404 Permits
- CA Department of Fish and Game 1600 Streambed Alteration Agreement

## 2.3 STORMWATER RUN-ON FROM OFFSITE AREAS

Run-on to the site is generated by point source discharges from upgradient swales, undeveloped land uses, and upgradient non-point source stormwater runoff.

The stormwater runoff drainage area contributing to offsite run-on is estimated to be approximately 34,835 acres. The anticipated runoff curve numbers range from 60 to 89. See Appendix A for all hydraulic calculations for the entire drainage basin.

The General Permit requires that temporary BMPs be implemented to direct offsite run-on away from disturbed areas through the use of runoff controls. Due to the size of the site, the size of the upstream drainage areas, and the existing topography it is not practical to divert the run-on from offsite around the

disturbed areas. Therefore the run-on will be included in the discharge from the site and shall collectively be in compliance with the effluent limitations in the General Permit. The off-site drainage areas and associated stormwater conveyance facilities or BMPs are shown on Post-Development Hydrology Plan, Drawing No. D-000-C-0202 in Appendix B.

## 2.4 FINDINGS OF THE CONSTRUCTION SITE SEDIMENT AND RECEIVING WATER RISK DETERMINATION

A construction site risk assessment has been performed for the project and the resultant risk level is Risk Level 1.

The risk level was determined through the use of the Sediment Risk Factor Worksheet. The risk level is based on project duration, location, proximity to impaired receiving waters and soil conditions. A copy of the Risk Level determination is included in Appendix C.

Table 2.2 and Table 2.3 summarize the sediment and receiving water risk factors and document the sources of information used to derive the factors.

**Table 2.2 Summary of Sediment Risk**

<b>RUSLE Factor</b>	<b>Value</b>	<b>Method for establishing value</b>
R	33.77	Site Location (California Isoerodent R Value Map) Included in Appendix C
K	0.43	Site Location (Google Earth KMZ file)
LS	1.02	Site Location (Google Earth KMZ file)
<b>Total Predicted Sediment Loss (tons/acre)</b>		<b>14.938716</b>
<b>Overall Sediment Risk</b> Low Sediment Risk < 15 tons/ acre Medium Sediment Risk >= 15 and < 75 tons/acre High Sediment Risk >= 75 tons/acre		<input checked="" type="checkbox"/> <b>Low</b> <input type="checkbox"/> <b>Medium</b> <input type="checkbox"/> <b>High</b>

Runoff from the project site discharges via sheet flow that are intercepted by moderately defined channels that discharge into Las Aquilas Creek and Panoche Creek then eventually into Panoche Creek upstream of Griswold Creek.

**Table 2.3 Summary of Receiving Water Risk**

<b>Receiving Water Name</b>	<b>303(d) Listed for Sediment Related Pollutant<sup>(1)</sup></b>	<b>TMDL for Sediment Related Pollutant<sup>(1)</sup></b>	<b>Beneficial Uses of COLD, SPAWN, and MIGRATORY<sup>(1)</sup></b>
Panoche Creek (Upstream of Griswold Creek)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<b>Overall Receiving Water Risk</b>			<input checked="" type="checkbox"/> <b>Low</b> <input type="checkbox"/> <b>High</b>
(1) If yes is selected for any option the Receiving Water Risk is High			

Risk Level 1 sites are subject to the narrative effluent limitations specified in the General Permit. The narrative effluent limitations require stormwater discharges associated with construction activity to minimize or prevent pollutants in stormwater and authorized non-stormwater through the use of controls, structures, and best management practices. This SWPPP has been prepared to address Risk Level 1 requirements (General Permit Attachment C).

## **2.5 CONSTRUCTION SCHEDULE**

The site sediment risk was determined based on construction taking place between October 2015 and December 2016. Modification or extension of the schedule (start and end dates) may affect risk determination and permit requirements. The LRP will contact the QSD if the schedule changes during construction to address potential impact to the SWPPP. The estimated schedule for planned work can be found in Appendix F. General schedule is as follows:

- October 2015 – March 2016 Sitework / Grading
- October 2015 – July 2016 Substation Construction
- December 2015 – December 2016 System Install
- November 2015 – June 2016 Security Fence Install
- October 2015 – February 2017 Site Stabilization

## **2.6 POTENTIAL CONSTRUCTION ACTIVITY AND POLLUTANT SOURCES**

Appendix G includes a list of construction activities and associated materials that are anticipated to be used onsite. These activities and associated materials will or could potentially contribute pollutants, other than sediment, to stormwater runoff.

The anticipated activities and associated pollutants were used in Section 3 to select the Best Management Practices for the project. Location of anticipated pollutants and associated BMPs are shown on the Site Map in Appendix B.

For sampling requirements for non-visible pollutants associated with construction activity please refer to Section 7.7.1. For a full and complete list of onsite pollutants, refer to the Material Safety Data Sheets (MSDS), which are retained onsite at the construction trailer.

## **2.7 IDENTIFICATION OF NON-STORMWATER DISCHARGES**

Non-stormwater discharges consist of discharges which do not originate from precipitation events. The General Permit provides allowances for specified non-stormwater discharges that do not cause erosion or carry other pollutants.

Non-stormwater discharges into storm drainage systems or waterways, which are not authorized under the General Permit and listed in the SWPPP, or authorized under a separate NPDES permit, are prohibited.

Non-stormwater discharges that are authorized from this project site include the following:

- None

Activities at this site that may result in unauthorized non-stormwater discharges include:

- Runoff from dust control applications of water or dust palliatives.

- Vehicle and equipment cleaning, fueling and maintenance operations.
- Sanitary and septic wastes.
- Chemical leaks and/or spills of any kind including but not limited to petroleum, paints, curing compounds, etc.

Steps will be taken, including the implementation of appropriate BMPs, to ensure that unauthorized discharges are eliminated, controlled, disposed, or treated on-site.

Discharges of construction materials and wastes, such as fuel or paint, resulting from dumping, spills, or direct contact with rainwater or stormwater runoff, are also prohibited.

## 2.8 REQUIRED SITE MAP INFORMATION

The construction project's Site Map(s) showing the project location, surface water boundaries, geographic features, construction site perimeter and general topography and other requirements identified in Attachment B of the General Permit is located in Appendix B. Table 2.6 identifies Map or Sheet Nos. where required elements are illustrated.

**Table 2.6 Required Map Information**

Included on Map/Plan Sheet No. <sup>(1)</sup>	Required Element
D-000-C-0001	The project's surrounding area (vicinity)
C-0101	Overall Site layout
C-0101	Construction site boundaries
C-0201 & C-0202	Drainage areas
C-0011 – C-0026	Discharge locations
C-0011 – C-0026	Sampling locations
C-0011 – C-0026	Areas of soil disturbance (temporary or permanent)
C-0011 – C-0026	Active areas of soil disturbance (cut or fill)
C-0011 – C-0026	Locations of runoff BMPs
C-0011 – C-0026	Locations of erosion control BMPs
C-0011 – C-0026	Locations of sediment control BMPs
N/A	ATS location (if applicable)
C-0011 – C-0026	Locations of sensitive habitats, watercourses, or other features which are not to be disturbed
C-0205 & 4107348	Locations of all post construction BMPs (Detention basins)
N/A	Waste storage areas
C-0011 – C-0026	Material storage areas
C-0011 – C-0026	Entrance and Exits
C-0011 – C-0026	Fueling Locations
	Loading / Unloading Areas
	Water Transfer Areas

Notes: (1) Indicate maps or drawings that information is included on (e.g., Vicinity Map, Site Map, Drainage Plans, Grading Plans, Progress Maps, etc.)

## Section 3 Best Management Practices

### 3.1 SCHEDULE FOR BMP IMPLEMENTATION

Table 3.1 BMP Implementation Schedule

	<b>BMP</b>	<b>Implementation</b>	<b>Duration</b>
<b>Erosion Control</b>	EC-1, Scheduling	Prior to Construction	Entirety of Project
	EC-2, Preservation of Existing Vegetation	Start of Construction	Entirety of Project
	EC-4, Hydroseeding	Completion of Roads/Utilities	Final Landscaping
	EC-5 Soil Binders	Start of Construction	Entirety of Project
	EC-7 Geotextile and Mats	Completion of Grading	Entirety of Project
	EC-9 Earth Dikes and Drainage Swales	Start of Construction	Permanent
	EC-10 Velocity Dissipation Devices	Start of Construction	Permanent
	EC-11 Slope Drains	Start of Construction	Permanent
	EC-15, Soil Preparation / Roughening	Start of Construction	During Grading
<b>Sediment Control</b>	SE-1 Silt Fence	Prior to Disturbance	Entirety of Project
	SE-4 Check Dams	Prior to Disturbance	Entirety of Project
	SE-5 Fiber Rolls	Prior to Disturbance	Entirety of Project
	SE-7 Street Sweeping	Start of Construction	Entirety of Project
<b>Tracking Control</b>	TC-1, Stabilized Construction Entrance/Exit	Prior to Disturbance	Entirety of Project
	TC-2, Stabilized Construction Roadway	Start of Construction	Permanent
<b>Wind Erosion</b>	WE-1, Wind Erosion Control	Start of Construction	Entirety of Project



## **3.2 EROSION AND SEDIMENT CONTROL**

Erosion and sediment controls are required by the General Permit to provide effective reduction or elimination of sediment related pollutants in stormwater discharges and authorized non-stormwater discharges from the Site. Applicable BMPs are identified in this section for erosion control, sediment control, tracking control, and wind erosion control. Sufficient quantities of temporary sediment control materials will be maintained on-site throughout the duration of the project. Allowing for implementation of temporary sediment controls in the event of predicted rain and for rapid response do to failures or emergencies, in conformance with other General Permit requirements and as described in this SWPPP.

### **3.2.1 Erosion Control**

Erosion control, also referred to as soil stabilization, consists of source control measures that are designed to prevent soil particles from detaching and becoming transported in stormwater runoff. Erosion control BMPs protect the soil surface by covering and/or binding soil particles.

This construction project will implement the following practices to provide effective temporary and final erosion control during construction:

1. Preserve existing vegetation where required and when feasible.
2. The area of soil disturbing operations will be controlled such that the Contractor is able to implement erosion control BMPs quickly and effectively.
3. Stabilize non-active areas within 14 days of cessation of construction activities or sooner if stipulated by local requirements.
4. Control erosion in concentrated flow paths by applying erosion control blankets, check dams, erosion control seeding or alternate methods.
5. Prior to the completion of construction, apply permanent erosion control to remaining disturbed soil areas.

Sufficient erosion control materials will be maintained onsite to allow implementation in conformance with this SWPPP.

The following temporary erosion control BMP selection table indicates the BMPs that will be implemented to control erosion on the construction site. Fact Sheets for temporary erosion control BMPs are provided in Appendix H.

**Table 3.2 Temporary Erosion Control BMPs**

CASQA Fact Sheet	BMP Name	Meets a Minimum Requirement <sup>(1)</sup>	BMP Used		If not used, state reason
			YES	NO	
EC-1	Scheduling	✓	x		
EC-2	Preservation of Existing Vegetation	✓	x		
EC-3	Hydraulic Mulch	✓ <sup>(2)</sup>		x	Using EC-4 and EC-7 instead.
EC-4	Hydroseed	✓ <sup>(2)</sup>	x		
EC-5	Soil Binders	✓ <sup>(2)</sup>	x		
EC-6	Straw Mulch	✓ <sup>(2)</sup>		x	Using EC-4 and EC-7 instead.
EC-7	Geotextiles and Mats	✓ <sup>(2)</sup>	x		
EC-8	Wood Mulching	✓ <sup>(2)</sup>		x	Using EC-4 and EC-7 instead.
EC-9	Earth Dike and Drainage Swales	✓ <sup>(3)</sup>	x		
EC-10	Velocity Dissipation Devices		x		
EC-11	Slope Drains		x		
EC-12	Stream Bank Stabilization			x	No stream bank disturbance
EC-14	Compost Blankets	✓ <sup>(2)</sup>		x	Using EC-4 and EC-7 instead.
EC-15	Soil Preparation-Roughening		x		
EC-16	Non-Vegetated Stabilization	✓ <sup>(2)</sup>		x	Using EC-4 and EC-7 instead.
WE-1	Wind Erosion Control	✓	x		
<b>Alternate BMPs Used:</b>					<b>If used, state reason:</b>
<sup>(1)</sup> Applicability to a specific project will be determined by the QSD. <sup>(2)</sup> The QSD will ensure implementation of one of the minimum measures listed or a combination thereof to achieve and maintain the Risk Level requirements. <sup>(3)</sup> Run-on from offsite will be directed away from all disturbed areas, diversion of offsite flows may require design/analysis by a licensed civil engineer and/or additional environmental permitting					

These temporary erosion control BMPs will be implemented in conformance with the following guidelines and as outlined in the BMP Factsheets provided in Appendix H. If there is a conflict between documents, the Site Map will prevail over narrative in the body of the SWPPP or guidance in the BMP Fact Sheets. Site specific details in the Site Map prevail over standard details included in the Site Map. The narrative in the body of the SWPPP prevails over guidance in the BMP Fact Sheets.

### **Scheduling (EC-1)**

Refer to Erosion and Sediment Control BMP Fact Sheets in Appendix H.

### **Preservation of Existing Vegetation (EC-2)**

Refer to Erosion and Sediment Control BMP Fact Sheets in Appendix H. All existing vegetation within the 100' buffers along each side of the jurisdictional washes will be preserved as well as the vegetation located in areas not planned to be disturbed.

**Hydroseed (EC-4)**

Refer to Erosion and Sediment Control BMP Fact Sheets in Appendix H. The entire disturbed area of the site, except for roads and equipment, is to be hydroseeded.

**Soil Binders (EC-5)**

Refer to Erosion and Sediment Control BMP Fact Sheets in Appendix H. The entire disturbed area of the site, except for roads and equipment, will need to be treated to prevent erosion until permanent vegetation is established.

**Geotextiles and Mats (EC-7)**

Refer to Erosion and Sediment Control BMP Fact Sheets in Appendix H. To be used in any cut or fill areas greater than 6' high or steeper than 3:1. Also may be used in any areas where new erosion may occur that requires additional measures or until permanent vegetation is established. Also used on channel side slopes.

**Earth Dikes and Drainage Swales (EC-9)**

Refer to Erosion and Sediment Control BMP Fact Sheets in Appendix H. Will be used primarily along the perimeter to divert off-site run-on to low water crossings, slope drains, and sediment/detention basins.

**Velocity Dissipation Devices (EC-10)**

Refer to Erosion and Sediment Control BMP Fact Sheets in Appendix H. Used at outlet of any pipes, culverts, cross drains and low water crossing. See drawings for specific locations, dimensions and stone sizes.

**Slope Drains (EC-11)**

Refer to Erosion and Sediment Control BMP Fact Sheets in Appendix H. To be used to divert water down high or steep slopes to prevent erosion and divert runoff to drainage swales. See drawings for specific locations and dimensions.

**Soil Preparation-Roughening (EC-15)**

Refer to Erosion and Sediment Control BMP Fact Sheets in Appendix H. On this project Soil Preparation-Roughening is primarily intended to be used on disturbed/fill areas and as a part of the hydroseeding preparations.

**Wind Erosion Control (WE-1)**

Refer to Erosion and Sediment Control BMP Fact Sheets in Appendix H and Dust Control Plan C-RPT-000-0003.

### 3.2.2 Sediment Controls

Sediment controls are temporary or permanent structural measures that are intended to complement the selected erosion control measures and reduce sediment discharges from active construction areas. Sediment controls are designed to intercept and settle out soil particles that have been detached and transported by the force of water.

The following sediment control BMP selection table indicates the BMPs that will be implemented to control/prevent spills and leaks on the construction site. Fact Sheets for temporary sediment control BMPs are provided in Appendix H.

**Table 3.3 Temporary Sediment Control BMPs**

CASQA Fact Sheet	BMP Name	Meets a Minimum Requirement <sup>(1)</sup>	BMP used		If not used, state reason
			YES	NO	
SE-1	Silt Fence	✓ <sup>(2) (3)</sup>	x		
SE-2	Sediment Basin			x	Perimeter controls to be used
SE-3	Sediment Trap			x	Perimeter controls to be used
SE-4	Check Dams		x		
SE-5	Fiber Rolls	✓ <sup>(2)(3)</sup>	x		
SE-6	Gravel Bag Berm	✓ <sup>(3)</sup>		x	Use SE-1 instead
SE-7	Street Sweeping	✓	x		
SE-8	Sandbag Barrier			x	Use SE-4 instead
SE-9	Straw Bale Barrier			x	Use SE-1 instead
SE-10	Storm Drain Inlet Protection	✓ RL2&3		x	Use SE-1 instead
SE-11	ATS			x	Project is Risk Level 1
SE-12	Temporary Silt Dike			x	Use SE-1 instead
SE-13	Compost Sock and Berm	✓ <sup>(3)</sup>		x	Use SE-1 instead
SE-14	Biofilter Bags	✓ <sup>(3)</sup>		x	No dewatering needed
TC-1	Stabilized Construction Entrance and Exit	✓	x		
TC-2	Stabilized Construction Roadway		x		
TC-3	Entrance Outlet Tire Wash			x	TC-1 and TC-2 will control tracking
<b>Alternate BMPs Used:</b>					<b>If used, state reason:</b>
<sup>(1)</sup> Applicability to a specific project will be determined by the QSD <sup>(2)</sup> The QSD will ensure implementation of one of the minimum measures listed or a combination thereof to achieve and maintain the Risk Level requirements					

These temporary sediment control BMPs will be implemented in conformance with the following guidelines and in accordance with the BMP Fact Sheets provided in Appendix H. If there is a conflict between documents, the Site Map will prevail over narrative in the body of the SWPPP or guidance in the BMP Fact Sheets. Site specific details in the Site Map prevail over standard details included in the Site Map. The narrative in the body of the SWPPP prevails over guidance in the BMP Fact Sheets.

#### **Silt Fence (SE-1)**

Refer to Erosion and Sediment Control BMP Fact Sheets in Appendix H. Refer to the Erosion and Sediment Control Plans and Details for locations and additional details.

#### **Check Dams (SE-4)**

Refer to Erosion and Sediment Control BMP Fact Sheets in Appendix H. Check Dams will be used downstream of construction site at Las Aquilas Creek.

#### **Fiber Rolls (SE-5)**

Refer to Erosion and Sediment Control BMP Fact Sheets in Appendix H. Refer to the Erosion and Sediment Control Plans and Details for locations and additional details.

#### **Street Sweeping (SE-7)**

Refer to Erosion and Sediment Control BMP Fact Sheets in Appendix H. Street Sweeping will be used on Little Panoche Road as necessary.

#### **Stabilized Construction Entrance and Exit (TC-1)**

Refer to Erosion and Sediment Control BMP Fact Sheets in Appendix H. Stabilized Construction Entrance and Exits are to be constructed at each access point to the site. See the Grading, Drainage and Sediment/Erosion Control Plans for locations.

#### **Stabilized Construction Roadway (TC-2)**

Refer to Erosion and Sediment Control BMP Fact Sheets in Appendix H. Location of the proposed construction road is shown on the Erosion and Sediment Control Plans, and is also referred to as the Perimeter Access Road. Road construction section is also shown on details sheets

### **3.3 NON-STORMWATER CONTROLS AND WASTE AND MATERIALS MANAGEMENT**

#### **3.3.1 Non-Stormwater Controls**

Non-stormwater discharges into storm drainage systems or waterways, which are not authorized under the General Permit, are prohibited. Non-stormwater discharges for which a separate NPDES permit is required by the local Regional Water Board are prohibited unless coverage under the separate NPDES permit has been obtained for the discharge. The selection of non-stormwater BMPs is based on the list of construction activities with a potential for non-stormwater discharges identified in Section 2.7 of this SWPPP.

The following non-stormwater control BMP selection table indicates the BMPs that will be implemented to control sediment on the construction site. Fact Sheets for temporary non-stormwater control BMPs are provided in Appendix H.

**Table 3.4 Temporary Non-Stormwater BMPs**

CASQA Fact Sheet	BMP Name	Meets a Minimum Requirement <sup>(1)</sup>	BMP used		If not used, state reason
			YES	NO	
NS-1	Water Conservation Practices	✓	x		
NS-2	Dewatering Operation			x	Groundwater below any excavation depths
NS-3	Paving and Grinding Operation		x		
NS-4	Temporary Stream Crossing			x	Only permanent clear spans
NS-5	Clear Water Diversion			x	No need for diversion
NS-6	Illicit Connection- Illegal Discharge Connection	✓	x		
NS-7	Potable Water Irrigation Discharge Detection			x	No irrigation system planned
NS-8	Vehicle and Equipment Cleaning	✓	x		
NS-9	Vehicle and Equipment Fueling	✓	x		
NS-10	Vehicle and Equipment Maintenance	✓	x		
NS-11	Pile Driving Operation		x		
NS-12	Concrete Curing		x		
NS-13	Concrete Finishing		x		
NS-14	Material and Equipment Use Over Water			x	No work over water
NS-15	Demolition Removal Adjacent to Water			x	On disturbance adjacent to waters
NS-16	Temporary Batch Plants			x	All material will be delivered to site ready for use
Alternate BMPs Used:			If used, state reason:		
<sup>(1)</sup> Applicability to a specific project will be determined by the QSD					

Non-stormwater BMPs will be implemented in conformance with the following guidelines and in accordance with the BMP Fact Sheets provided in Appendix H. If there is a conflict between documents, the Site Map will prevail over narrative in the body of the SWPPP or guidance in the BMP Fact Sheets. Site specific details in the Site Map prevail over standard details included in the Site Map. The narrative in the body of the SWPPP prevails over guidance in the BMP Fact Sheets.

**Water Conservation Practices (NS-1)**

Refer to Non-Stormwater BMP Fact Sheets in Appendix H

**Paving and Grinding Operation (NS-3)**

Refer to Non-Stormwater BMP Fact Sheets in Appendix H

**Illicit Connection- Illegal Discharge Connection (NS-6)**

Refer to Non-Stormwater BMP Fact Sheets in Appendix H

**Vehicle and Equipment Cleaning (NS-8)**

Refer to Non-Stormwater BMP Fact Sheets in Appendix H

**Vehicle and Equipment Fueling (NS-9)**

Refer to Non-Stormwater BMP Fact Sheets in Appendix H

**Vehicle and Equipment Maintenance (NS-10)**

Refer to Non-Stormwater BMP Fact Sheets in Appendix H

**Pile Driving Operation (NS-11)**

Refer to Non-Stormwater BMP Fact Sheets in Appendix H. Pile driving for posts will be limited to very small areas at any given time, and local measures will be employed to prevent spills and contamination.

**Concrete Curing (NS-12)**

Refer to Non-Stormwater BMP Fact Sheets in Appendix H

**Concrete Finishing (NS-13)**

Refer to Non-Stormwater BMP Fact Sheets in Appendix H

**3.3.2 Materials Management and Waste Management**

Materials management control practices consist of implementing procedural and structural BMPs for handling, storing and using construction materials to prevent the release of those materials into stormwater discharges. The amount and type of construction materials to be utilized at the Site will depend upon the type of construction and the length of the construction period. The materials may be used continuously, such as fuel for vehicles and equipment, or the materials may be used for a discrete period, such as soil binders for temporary stabilization.

Waste management consist of implementing procedural and structural BMPs for handling, storing and ensuring proper disposal of wastes to prevent the release of those wastes into stormwater discharges. Waste management should be conducted in accordance with the Project's Construction Waste Management Plan

Materials and waste management pollution control BMPs will be implemented to minimize stormwater contact with construction materials, wastes and service areas; and to prevent materials and wastes from being discharged off-site. The primary mechanisms for stormwater contact that will be addressed include:

- Direct contact with precipitation
- Contact with stormwater run-on and runoff
- Wind dispersion of loose materials
- Direct discharge to the storm drain system through spills or dumping

- Extended contact with some materials and wastes, such as asphalt cold mix and treated wood products, which can leach pollutants into stormwater.

A list of construction activities is provided in Section 2.6. The following Materials and Waste Management BMP selection table indicates the BMPs that will be implemented to handle materials and control construction site wastes associated with these construction activities. Fact Sheets for Materials and Waste Management BMPs are provided in Appendix H.

All waste containers will be covered at the end of each work day and when raining.

**Table 3.5 Temporary Materials Management BMPs**

CASQA Fact Sheet	BMP Name	Meets a Minimum Requirement <sup>(1)</sup>	BMP used		If not used, state reason
			YES	NO	
WM-01	Material Delivery and Storage	✓	x		
WM-02	Material Use	✓	x		
WM-03	Stockpile Management	✓	x		
WM-04	Spill Prevention and Control	✓	x		
WM-05	Solid Waste Management	✓	x		
WM-06	Hazardous Waste Management	✓	x		
WM-07	Contaminated Soil Management			x	No pre-construction soil contamination on site
WM-08	Concrete Waste Management	✓	x		
WM-09	Sanitary-Septic Waste Management	✓	x		
WM-10	Liquid Waste Management			x	No creation of non-hazardous liquid waste on site.
<b>Alternate BMPs Used:</b>				<b>If used, state reason:</b>	

<sup>(1)</sup> Applicability to a specific project will be determined by the QSD.

Material management BMPs will be implemented in conformance with the following guidelines and in accordance with the BMP Fact Sheets provided in Appendix H. If there is a conflict between documents, the Site Map will prevail over narrative in the body of the SWPPP or guidance in the BMP Fact Sheets. Site specific details in the Site Map prevail over standard details included in the Site Map. The narrative in the body of the SWPPP prevails over guidance in the BMP Fact Sheets.



### **Material Delivery and Storage (WM-01)**

Refer to Material and Waste Management BMP Fact Sheets in Appendix H

### **Material Use (WM-02)**

Refer to Material and Waste Management BMP Fact Sheets in Appendix H

### **Stockpile Management (WM-03)**

Refer to Material and Waste Management BMP Fact Sheets in Appendix H

### **Spill Prevention and Control (WM-04)**

Refer to Material and Waste Management BMP Fact Sheets in Appendix H

### **Solid Waste Management (WM-05)**

Refer to Material and Waste Management BMP Fact Sheets and Trash Management Plan (Spec No. R-PLN-000-002) in Appendix H. **All waste containers will be covered at the end of each work day and when raining.**

### **Hazardous Waste Management (WM-06)**

Refer to Material and Waste Management BMP Fact Sheets in Appendix H

### **Concrete Waste Management (WM-08)**

Refer to Material and Waste Management BMP Fact Sheets in Appendix H. **Location of any concrete washouts to be approved by the QSP.**

### **Sanitary-Septic Waste Management (WM-09)**

Refer to Material and Waste Management BMP Fact Sheets in Appendix H

## **3.4 POST CONSTRUCTION STORMWATER MANAGEMENT MEASURES**

Post construction BMPs are permanent measures installed during construction, designed to reduce or eliminate pollutant discharges from the site after construction is completed.

This site is located in an area subject to a Phase I or Phase II Municipal Separate Storm Sewer System (MS4) permit approved Stormwater Management Plan. ☐ Yes ☒ No

Post construction runoff reduction will be achieved by permanent measures. These measures are detailed in the Grading and Drainage Plans in Appendix B.

The following source control post construction BMPs to comply with General Permit Section XIII.B and local requirements have been identified for the site:

- Retention Basins (PG&E)
- Stream Buffer
- Pervious Pavements
- Soil Quality
- Detention Pond

A plan for the post construction funding and maintenance of these BMPs has been developed to address at minimum five years following construction. The post construction BMPs that are described above

will be funded and maintained by the LRP. If required, post construction funding and maintenance will be submitted with the NOT.

## Section 4 BMP Inspection, and Maintenance

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### **4.1 BMP INSPECTION AND MAINTENANCE**

The General Permit requires routine weekly inspections of BMPs, along with inspections before, during, and after qualifying rain events. A BMP inspection checklist will be filled out for inspections and maintained on-site with the SWPPP. The inspection checklist includes the necessary information covered in Section 7.6. A blank inspection checklist can be found in Appendix I. Completed checklists will be kept in CSMP Attachment 2 “Monitoring Records.

BMPs will be maintained regularly to ensure proper and effective functionality. If necessary, corrective actions will be implemented within 72 hours of identified deficiencies and associated amendments to the SWPPP will be prepared by the QSD.

Specific details for maintenance, inspection, and repair of Construction Site BMPs can be found in the BMP Factsheets in Appendix H.

### **4.2 RAIN EVENT ACTION PLANS**

Rain Event Action Plans (REAPs) are not required for Risk Level 1 projects.

## Section 5 Training

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Appendix L identifies the QSPs for the project. To promote stormwater management awareness specific for this project, periodic training of job-site personnel will be included as part of routine project meetings (e.g. daily/weekly tailgate safety meetings), or task specific trainings as needed.

The QSP will be responsible for providing this information at the meetings, and subsequently completing the training logs shown in Appendix K, which identifies the site-specific stormwater topics covered as well as the names of site personnel who attended the meeting. Tasks may be delegated to trained employees by the QSP provided adequate supervision and oversight is provided. Training will correspond to the specific task delegated including: SWPPP implementation; BMP inspection and maintenance; and record keeping.

Documentation of training activities (formal and informal) is retained in SWPPP Appendix K.

## Section 6 Responsible Parties and Operators

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### 6.1 RESPONSIBLE PARTIES

Approved Signatories who are responsible for SWPPP implementation and have authority to sign permit-related documents are listed below. Written authorizations from the LRP for these individuals are provided in Appendix L. The Approved Signatories assigned to this project is:

Name	Title	Phone Number
Mark Noyes	President	(914) 419-6701

QSPs identified for the project are identified in Appendix L. The QSP will have primary responsibility and significant authority for the implementation, maintenance and inspection/monitoring of SWPPP requirements. The QSP will be available at all times throughout the duration of the project. Duties of the QSP include but are not limited to:

- Implementing all elements of the General Permit and SWPPP, including but not limited to:
  - Ensuring all BMPs are implemented, inspected, and properly maintained;
  - Performing non-stormwater and stormwater visual observations and inspections;
  - Performing non-stormwater and storm sampling and analysis, as required;
  - Performing routine inspections and observations;
  - Implementing non-stormwater management, and materials and waste management activities such as: monitoring discharges; general Site clean-up; vehicle and equipment cleaning, fueling and maintenance; spill control; ensuring that no materials other than stormwater are discharged in quantities which will have an adverse effect on receiving waters or storm drain systems; etc.;
- The QSP may delegate these inspections and activities to an appropriately trained employee, but will ensure adequacy and adequate deployment.
- Ensuring elimination of unauthorized discharges.
- The QSPs will be assigned authority by the LRP to mobilize crews in order to make immediate repairs to the control measures.
- Coordinate with the Contractor(s) to assure all of the necessary corrections/repairs are made immediately and that the project complies with the SWPPP, the General Permit and approved plans at all times.
- Notifying the LRP or Authorized Signatory immediately of off-site discharges or other non-compliance events.

### 6.2 CONTRACTOR LIST

For list of all contractors and subcontractors who will be directed by the QSP, see Appendix M.

## Section 7 Construction Site Monitoring Program

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### 7.1 PURPOSE

This Construction Site Monitoring Program was developed to address the following objectives:

1. To demonstrate that the site is in compliance with the Discharge Prohibitions of the Construction General Permit;
2. To determine whether non-visible pollutants are present at the construction site and are causing or contributing to exceedances of water quality objectives;
3. To determine whether immediate corrective actions, additional Best Management Practices (BMP) implementation, or SWPPP revisions are necessary to reduce pollutants in stormwater discharges and authorized non-stormwater discharges;
4. To determine whether BMPs included in the SWPPP are effective in preventing or reducing pollutants in stormwater discharges and authorized non-stormwater discharges.

### 7.2 APPLICABILITY OF PERMIT REQUIREMENTS

This project has been determined to be a Risk Level 1 project. The General Permit identifies the following types of monitoring as being applicable for a Risk Level 1 project.

Risk Level 1

- Visual inspections of Best Management Practices (BMPs);
- Visual monitoring of the site related to qualifying storm events;
- Visual monitoring of the site for non-stormwater discharges;
- Sampling and analysis of construction site runoff for non-visible pollutants when applicable; and
- Sampling and analysis of construction site runoff as required by the Regional Water Board when applicable.

### 7.3. WEATHER AND RAIN EVENT TRACKING

Visual monitoring and inspections requirements of the General Permit are triggered by a qualifying rain event. The General Permit defines a qualifying rain event as any event that produces ½ inch of precipitation. A minimum of 48 hours of dry weather will be used to distinguish between separate qualifying storm events.

#### 7.3.1 Weather Tracking

The QSP should daily consult the National Oceanographic and Atmospheric Administration (NOAA) for the weather forecasts. These forecasts can be obtained at <http://www.srh.noaa.gov/>. Weather reports should be printed and maintained with the SWPPP in CSMP Attachment 1 “Weather Reports”.

#### 7.3.2 Rain Gauges

The QSP will install one (1) rain gauge in the vicinity of the temporary construction trailers on the project site. Locate the gauge in an open area away from obstructions such as trees or overhangs. Mount the gauge on a post at a height of 3 to 5 feet with the gauge extending several inches beyond the post. Make sure that the top of the gauge is level. Make sure the post is not in an area where rainwater can indirectly splash from sheds, equipment, trailers, etc.

The rain gauge(s) will be read daily during normal site scheduled hours. The rain gauge should be read at approximately the same time every day and the date and time of each reading recorded. Log rain gauge readings in CSMP Attachment 1 “Weather Records”. Follow the rain gauge instructions to obtain accurate measurements.

Once the rain gauge reading has been recorded, accumulated rain will be emptied and the gauge reset.

For comparison with the site rain gauge, the nearest appropriate governmental rain gauge is Pinnacles RAWS, located at Lat. 36.4708, Long. -121.1472, approximately 19 miles SW of the project site. Data from this rain gauge can found on the NWS website at

[http://www.cnrfc.noaa.gov/county\\_precipMaps.php?group=sanbenito&hour=24](http://www.cnrfc.noaa.gov/county_precipMaps.php?group=sanbenito&hour=24).

## **7.4 MONITORING LOCATIONS**

Monitoring locations are shown on the Site Maps in Appendix B. Monitoring locations are described in the Sections 7.6 and 7.7.

Whenever changes in the construction site might affect the appropriateness of sampling locations, the sampling locations will be revised accordingly. All such revisions will be implemented as soon as feasible and the SWPPP amended. Temporary changes that result in a one-time additional sampling location do not require a SWPPP amendment.

## **7.5 SAFETY AND MONITORING EXEMPTIONS**

Safety practices for sample collection will be in accordance with the AMEC Health and Safety Plan.

A summary of the safety requirements that apply to sampling personnel is provided below.

- Appropriate personal protection equipment

This project is not required to collect samples or conduct visual observations (inspections) under the following conditions:

- During dangerous weather conditions such as flooding and electrical storms.
- Outside of scheduled site business hours.

Scheduled site business hours are: Monday – Friday 7:00 AM to 6:00 PM

If monitoring (visual monitoring or sample collection) of the site is unsafe because of the dangerous conditions noted above then the QSP will document the conditions for why an exception to performing the monitoring was necessary. The exemption documentation will be filed in CSMP Attachment 2 “Monitoring Records”.

## **7.6 VISUAL MONITORING**

Visual monitoring includes observations and inspections. Inspections of BMPs are required to identify and record BMPs that need maintenance to operate effectively, that have failed, or that could fail to operate as intended. Visual observations of the site are required to observe storm water drainage areas to identify any spills, leaks, or uncontrolled pollutant sources.

Table 7.1 identifies the required frequency of visual observations and inspections. Inspections and observations will be conducted at the locations identified in Section 7.6.3.

**Table 7.1 Summary of Visual Monitoring and Inspections**

Type of Inspection	Frequency
<i>Routine Inspections</i>	
BMP Inspections	Weekly <sup>1</sup>
BMP Inspections – Tracking Control	Daily
Non-Stormwater Discharge Observations	Quarterly during daylight hours
<i>Rain Event Triggered Inspections</i>	
Site Inspections Prior to a Qualifying Event	Within 48 hours of a qualifying event <sup>2</sup>
BMP Inspections During an Extended Storm Event	Every 24-hour period of a rain event <sup>2</sup>
Site Inspections Following a Qualifying Event	Within 48 hours of a qualifying event <sup>2</sup>
<sup>1</sup> Most BMPs must be inspected weekly; those identified below must be inspected more frequently. <sup>2</sup> Inspections are only required during scheduled site operating hours. Note however, these inspections are required daily regardless of the amount of precipitation.	

### **7.6.1 Routine Observations and Inspections**

Routine site inspections and visual monitoring are necessary to ensure that the project is in compliance with the requirements of the Construction General Permit.

#### **7.6.1.1 Routine BMP Inspections**

Inspections of BMPs are conducted to identify and record:

- BMPs that are properly installed;
- BMPs that need maintenance to operate effectively;
- BMPs that have failed; or
- BMPs that could fail to operate as intended.
- Need for any additional BMPs.

#### **7.6.1.2 Non-Stormwater Discharge Observations**

Each drainage area will be inspected for the presence of or indications of prior unauthorized and authorized non-stormwater discharges. Inspections will record:

- Presence or evidence of any non-stormwater discharge (authorized or unauthorized);
- Pollutant characteristics (floating and suspended material, sheen, discoloration, turbidity, odor, etc.); and
- Source of discharge.

### **7.6.2 Rain-Event Triggered Observations and Inspections**

Visual observations of the site and inspections of BMPs are required prior to a qualifying rain event; following a qualifying rain event, and every 24-hour period during a qualifying rain event. Pre-rain inspections will be conducted after consulting NOAA and determining that a precipitation event with a 50% or greater probability of precipitation has been predicted.

### 7.6.2.1 Visual Observations Prior to a Forecasted Qualifying Rain Event

Within 48-hours prior to a qualifying event a stormwater visual monitoring site inspection will include observations of the following locations:

- Stormwater drainage areas to identify any spills, leaks, or uncontrolled pollutant sources;
- BMPs to identify if they have been properly implemented;
- Any stormwater storage and containment areas to detect leaks and ensure maintenance of adequate freeboard.
- BMP inspections and visual monitoring will be triggered by a NOAA quantitative predicted forecast (QPF) that indicates ½-inch or more of rain will occur in the project area.

### 7.6.2.2 BMP Inspections During an Extended Storm Event

During an extended rain event, BMP inspections will be conducted to identify and record:

- BMPs that are properly installed;
- BMPs that need maintenance to operate effectively;
- BMPs that have failed; or
- BMPs that could fail to operate as intended.

If the construction site is not accessible during the rain event, the visual inspections will be performed at all relevant outfalls, discharge points, downstream locations. The inspections should record any projected maintenance activities.

### 7.6.2.2 Visual Observations Following a Qualifying Rain Event

Within 48 hours following a qualifying rain event (0.5 inches of rain) a stormwater visual monitoring site inspection is required to observe:

- Stormwater drainage areas to identify any spills, leaks, or uncontrolled pollutant sources;
- BMPs to identify if they have been properly designed, implemented, and effective;
- Need for additional BMPs;
- Any stormwater storage and containment areas to detect leaks and ensure maintenance of adequate freeboard; and
- Discharge of stored or contained rain water.

## 7.6.3 Visual Monitoring Procedures

Visual monitoring will be conducted by the QSP or staff trained by and under the supervision of the QSP.

The name(s) and contact number(s) of the site visual monitoring personnel are listed below and their training qualifications are provided in Appendix K.

Assigned inspector: (TBD) \_\_\_\_\_ Contact phone: \_\_\_\_\_

Alternate inspector: (TBD) \_\_\_\_\_ Contact phone: \_\_\_\_\_

Stormwater observations will be documented on the *Visual Inspection Field Log Sheet* (see CSMP Attachment 3 “Example Forms”). BMP inspections will be documented on the site specific BMP inspection checklist. Any photographs used to document observations will be referenced on stormwater site inspection report and maintained with the Monitoring Records in Attachment 2.



The QSP will within 14 days of the inspection submit copies of the completed inspection report to Amec Foster Wheeler/Kamtech.

The completed reports will be kept in CSMP Attachment 2 “Monitoring Records”.

#### **7.6.4 Visual Monitoring Follow-Up and Reporting**

Correction of deficiencies identified by the observations or inspections, including required repairs or maintenance of BMPs, will be initiated and completed as soon as possible.

If identified deficiencies require design changes, including additional BMPs, the implementation of changes will be initiated within 72 hours of identification and be completed as soon as possible. When design changes to BMPs are required, the SWPPP will be amended to reflect the changes.

Deficiencies identified in site inspection reports and correction of deficiencies will be tracked on the *Inspection Field Log Sheet* or *BMP Inspection Report* and will be submitted to the QSP and will be kept in CSMP Attachment 2 “Monitoring Records”.

The QSP will within 14 days of the inspection submit copies of the completed *Inspection Field Log Sheet* or *BMP Inspection Report* with the corrective actions to Amec Foster Wheeler/Kamtech.

Results of visual monitoring will be summarized and reported in the Annual Report.

#### **7.6.5 Visual Monitoring Locations**

The inspections and observations identified in Sections 7.6.1 and 7.6.2 will be conducted at the locations identified in this section.

BMP locations are shown on the Site Maps in SWPPP Appendix B.

There are 3 drainage area(s) on the project site, the contractor’s yard, staging areas, and storage areas. Drainage area(s) are shown on the Post-Developed Hyrdology Plan, drawing D-000-C-0202 in Appendix B and Table 7.2 identifies each drainage area by location.

**Table 7.2 Site Drainage Areas**

<b>Location</b>	<b>Description</b>
SW of Site	Drainage Basin for Panoche Creek
W of Site	Drainage Basin for Los Aquilas Creek
N of Site	Drainage Basin for unnamed tributary for Panoche Creek located north of Yturiarte Road

There are two (2) stormwater storage or containment area(s) on the project site. Stormwater storage or containment area(s) are shown on drawings D-000-C-0205 and drawing 4107348 in Appendix B and Table 7.3 identifies each stormwater storage or containment area by location.

**Table 7.3 Stormwater Storage and Containment Areas**

<b>Location No.</b>	<b>Location</b>
POND #3	36.6281 N, 120.8770 W – SW portion of site
SWITCHYARD POND	36.6314 N, 120.8778 W – SW portion of site

There are two (2) discharge location(s) on the project site. Two (2) of these stormwater discharge location(s) are defined as those from the stormwater detention ponds, and are shown on the Site Maps in Appendix B and Table 7.4 identifies each stormwater discharge location. These are the locations of concentrated discharge, as the remainder of the site is primarily sheet flow.

**Table 7.4 Site Stormwater Discharge Locations**

<b>Location No.</b>	<b>Location</b>
A	LAT. 36.6557 N, LONG. 120.8776 W – AT POND #3
B	LAT. 36.6312 N, LONG. 120.8778 W – AT SWITCHYARD POND

## **7.7 WATER QUALITY SAMPLING AND ANALYSIS**

### **7.7.1 Sampling and Analysis Plan for Non-Visible Pollutants in Stormwater Runoff Discharges**

This Sampling and Analysis Plan for Non-Visible Pollutants describes the sampling and analysis strategy and schedule for monitoring non-visible pollutants in stormwater runoff discharges from the project site.

Sampling for non-visible pollutants will be conducted when (1) a breach, leakage, malfunction, or spill is observed; and (2) the leak or spill has not been cleaned up prior to the rain event; and (3) there is the potential for discharge of non-visible pollutants to surface waters or drainage system.

The following construction materials, wastes, or activities, as identified in Section 2.6, are potential sources of non-visible pollutants to stormwater discharges from the project. Storage, use, and operational locations are shown on the Site Maps in Appendix B.

- Vehicle and Equipment Use
- Grading / Earthwork
- Asphalt Work
- Concrete / Masonry Work
- Landscaping

There are no known existing site features, as identified in Section 2.6, that are potential sources of non-visible pollutants to stormwater discharges from the project.

The following soil amendments have the potential to change the chemical properties, engineering properties, or erosion resistance of the soil and will be used on the project site.

- Fertilizer

#### *7.7.1.1 Sampling Schedule*

Samples for the potential non-visible pollutant(s) and a sufficiently large unaffected background sample will be collected during the first two hours of discharge from rain events that result in a sufficient discharge for sample collection. Samples will be collected during the site's scheduled hours and will be collected regardless of the time of year and phase of the construction.

Collection of discharge samples for non-visible pollutant monitoring will be triggered when any of the following conditions are observed during site inspections conducted prior to or during a rain event.

- Materials or wastes containing potential non-visible pollutants are not stored under watertight conditions. Watertight conditions are defined as (1) storage in a watertight container, (2) storage under a watertight roof or within a building, or (3) protected by temporary cover and containment that prevents stormwater contact and runoff from the storage area.
- Materials or wastes containing potential non-visible pollutants are stored under watertight conditions, but (1) a breach, malfunction, leakage, or spill is observed, (2) the leak or spill is not cleaned up prior to the rain event, and (3) there is the potential for discharge of non-visible pollutants to surface waters or a storm drain system.
- A construction activity, including but not limited to those in Section 2.6, with the potential to contribute non-visible pollutants (1) was occurring during or within 24 hours prior to the rain event, (2) BMPs were observed to be breached, malfunctioning, or improperly implemented, and (3) there is the potential for discharge of non-visible pollutants to surface waters or a storm drain system.
- Soil amendments that have the potential to change the chemical properties, engineering properties, or erosion resistance of the soil have been applied, and there is the potential for discharge of non-visible pollutants to surface waters or a storm drain system.
- Stormwater runoff from an area contaminated by historical usage of the site has been observed to combine with stormwater runoff from the site, and there is the potential for discharge of non-visible pollutants to surface waters or a storm drain system.

### 7.7.1.2 Sampling Locations

Sampling locations are based on proximity to planned non-visible pollutant storage, occurrence or use; accessibility for sampling, and personnel safety. Planned non-visible pollutant sampling locations are shown on the Site Maps in Appendix B and include the locations identified in Table 7.5 through 7.10.

No sampling locations on the project site and the contractor's yard have been identified for the collection of samples of runoff from planned material and waste storage areas and areas where non-visible pollutant producing construction activities are planned. The QSP will determine where sampling for non-visible pollutants will take place depending on where such material may be temporarily stored on the site.

**Table 7.6 Non-Visible Pollutant Sample Locations – Contractors' Yard**

<b>Sample Location Number (TBD)</b>	<b>Sample Location Description (TBD)</b>	<b>Sample Location Latitude and Longitude (Decimal Degrees)</b>

Four (4) sampling locations have been identified for the collection of samples of runoff from drainage areas where soil amendments will be applied that have the potential to affect water quality.

**Table 7.7 Non-Visible Pollutant Sample Locations – Soil Amendment Areas**

<b>Sample Location Number</b>	<b>Sample Location</b>	<b>Sample Location Latitude and Longitude (Decimal Degrees)</b>
#1	South of NW perimeter road entrance and Little Panoche Road intersection.	36.6438 N 120.8767 W
#2	Los Aquilas Creek at Little Panoche Rd.	36.6360 N 120.8767 W
#3	Panoche Creek at Little Panoche Rd.	36.6220 N 120.8768 W
#4	Panoche Creek at Yturiarte Road	36.6172 N 120.8449 W

Three (3) sampling locations have been identified for the collection of an uncontaminated sample of runoff as a background sample for comparison with the samples being analyzed for non-visible pollutants. This location(s) was selected such that the sample will not have come in contact with the operations, activities, or areas identified in Section 7.7.1 or with disturbed soils areas.

**Table 7.9 Non-Visible Pollutant Sample Locations – Background (Unaffected Sample)**

<b>Sample Location Number</b>	<b>Sample Location</b>	<b>Sample Location Latitude and Longitude (Decimal Degrees)</b>
BG-1	In NW area above site	36.6553 N 120.8845 W
BG-2	Upstream of perimeter road bridge over Los Aquilas Creek	36.6376 N 120.9014 W
BG-3	Upstream of perimeter road bridge over Panoche Creek	36.6172 N 120.8925 W

#### 7.7.1.3 Monitoring Preparation

Non-visible pollutant samples will be collected by:

Contractor ☒ Yes ☐ No  
 Consultant ☐ Yes ☐ No  
 Laboratory ☐ Yes ☐ No

Samples on the project site will be collected by the following contractor sampling personnel:

Name/Telephone Number: TBD

Alternate(s)/Telephone Number: TBD

An adequate stock of monitoring supplies and equipment for monitoring non-visible pollutants will be available on the project site prior to a sampling event. Monitoring supplies and equipment will be stored in a cool temperature environment that will not come into contact with rain or direct sunlight. Sampling personnel will be available to collect samples in accordance with the sampling schedule. Supplies maintained at the project site will include, but are not limited to, clean powder-free nitrile gloves, sample collection equipment, coolers, appropriate number and volume of sample bottles, identification labels, re-sealable storage bags, paper towels, personal rain gear, ice, and *Effluent Sampling Field Log Sheets* and Chain of Custody (CoC) forms, which are provided in CSMP Attachment 3 “Example Forms”.

#### 7.7.1.4 Analytical Constituents

Table 7.11 lists the specific sources and types of potential non-visible pollutants on the project site and the water quality indicator constituent(s) for that pollutant.

**Table 7.11 Potential Non-Visible Pollutants and Water Quality Indicator Constituents**

<b>Pollutant Source</b>	<b>Pollutant</b>	<b>Water Quality Indicator Constituent</b>
Vehicle and Equipment Use	Batteries	Sulfuric Acid; Pb, pH
Asphalt Work	Asphalt Concrete	VOCs
Concrete / Masonry Work	Sealant	SCOC
Concrete / Masonry Work	Curing Compounds	VOCs, SVOCs, pH
Landscaping	Fertilizers	TKN, NO <sub>3</sub> , BOD, COD, DOC, Sulfate, NH <sub>3</sub> , Phosphate, Potassium
Drywall		Cu, Al. General Minerals
Framing/Carpentry	Treated Wood	Cu, Cr, As, Zn
Framing/Carpentry	Particle Board	Formaldehyde
Framing/Carpentry	Untreated Wood	BOD
Heating, Ventilation, Air Cond.		Freon
Insulation		Al, Zn
Painting	Metallic Paint	COD, VOCs, SVOCs
Roofing		Cu, Pb, VOCs
Utility Line Testing & Flushing		Residual Chlorine, chloramines

#### 7.7.1.5 Sample Collection

Samples of discharge will be collected at the designated non-visible pollutant sampling locations shown on the Site Maps in Appendix B or in the locations determined by observed breaches, malfunctions, leakages, spills, operational areas, soil amendment application areas, and historical site usage areas that triggered the sampling event.

Grab samples will be collected and preserved in accordance with the generally accepted sampling procedures. Only the QSP, or personnel trained in water quality sampling under the direction of the QSP will collect samples.

Sample collection and handling requirements are described in Section 7.7.7.

### 7.7.1.6 Sample Analysis

Samples will be analyzed using the analytical methods identified in the Table 7.12.

Samples will be analyzed by:

Laboratory Name: (TBD by QSP) \_\_\_\_\_

Street Address: \_\_\_\_\_

City, State Zip: \_\_\_\_\_

Telephone Number: \_\_\_\_\_

Point of Contact: \_\_\_\_\_

ELAP Certification Number: \_\_\_\_\_

Samples will be delivered to the laboratory by:

Driven by Contractor ☐ Yes ☐ No

Picked up by Laboratory Courier ☐ Yes ☐ No

Shipped ☒ Yes ☐ No

### 7.7.1.7 Data Evaluation and Reporting

The QSP will complete an evaluation of the water quality sample analytical results.

Runoff/down gradient results will be compared with the associated upgradient/unaffected results and any associated run-on results. Should the runoff/down gradient sample show an increased level of the tested analyte relative to the unaffected background sample, which cannot be explained by run-on results, the BMPs, site conditions, and surrounding influences will be assessed to determine the probable cause for the increase.

As determined by the site and data evaluation, appropriate BMPs will be repaired or modified to mitigate discharges of non-visible pollutant concentrations. Any revisions to the BMPs will be recorded as an amendment to the SWPPP.

The General Permit prohibits the storm water discharges that contain hazardous substances equal to or in excess of reportable quantities established in 40 C.F.R. §§ 117.3 and 302.4. The results of any non-stormwater discharge results that indicate the presence of a hazardous substance in excess of established reportable quantities will be immediately reported to the Regional Water Board and other agencies as required by 40 C.F.R. §§ 117.3 and 302.4.

Results of non-visible pollutant monitoring will be reported in the Annual Report.

### 7.7.2 Sampling and Analysis Plan for pH and Turbidity in Stormwater Runoff Discharges

Sampling and analysis of runoff for pH and turbidity is not required for Risk Level 1 projects.

### 7.7.3 Additional Monitoring Following an NEL Exceedance

This project is not subject to NELs.

### 7.7.4 Sampling and Analysis Plan for Non-Stormwater Discharges

This project is not subject to the non-stormwater sampling and analysis requirements of the General Permit because it is a Risk Level 1 project.

### **7.7.5 Sampling and Analysis Plan for Other Pollutants Required by the Regional Water Board**

The Regional Water Board has not specified monitoring for additional pollutants.

### **7.7.6 Training of Sampling Personnel**

Sampling personnel will be trained to collect, maintain, and ship samples in accordance with the Surface Water Ambient Monitoring program (SWAMP) 2008 Quality Assurance Program Plan (QAPrP). Training records of designated contractor sampling personnel are provided in Appendix K.

The stormwater sampler(s) and alternate(s) have received the following stormwater sampling training:

<b>Name (TBD)</b>	<b>Training</b>
<hr/>	<hr/>
<hr/>	<hr/>

The stormwater sampler(s) and alternates have the following stormwater sampling experience:

<b>Name (TBD)</b>	<b>Experience</b>
<hr/>	<hr/>
<hr/>	<hr/>

### **7.7.7 Sample Collection and Handling**

#### **7.7.7.1 Sample Collection**

Samples will be collected at the designated sampling locations shown on the Site Maps and listed in the preceding sections. Samples will be collected, maintained and shipped in accordance with the SWAMP 2008 Quality Assurance Program Plan (QAPrP).

Grab samples will be collected and preserved in accordance with the methods identified in preceding sections.

To maintain sample integrity and prevent cross-contamination, sample collection personnel will follow the protocols below.

- Collect samples (for laboratory analysis) only in analytical laboratory-provided sample containers;
- Wear clean, powder-free nitrile gloves when collecting samples;
- Change gloves whenever something not known to be clean has been touched;
- Change gloves between sites;
- Decontaminate all equipment (e.g. bucket, tubing) prior to sample collection using a trisodium phosphate water wash, distilled water rinse, and final rinse with distilled water. (Dispose of wash and rinse water appropriately, i.e., do not discharge to storm drain or receiving water). Do not decontaminate laboratory provided sample containers;
- Do not smoke during sampling events;
- Never sample near a running vehicle;



- Do not park vehicles in the immediate sample collection area (even non-running vehicles);
- Do not eat or drink during sample collection; and
- Do not breathe, sneeze, or cough in the direction of an open sample container.

The most important aspect of grab sampling is to collect a sample that represents the entire runoff stream. Typically, samples are collected by dipping the collection container in the runoff flow paths and streams as noted below.

- i. For small streams and flow paths, simply dip the bottle facing upstream until full.
- ii. For larger stream that can be safely accessed, collect a sample in the middle of the flow stream by directly dipping the mouth of the bottle. Once again making sure that the opening of the bottle is facing upstream as to avoid any contamination by the sampler.
- iii. For larger streams that cannot be safely waded, pole-samplers may be needed to safely access the representative flow.
- iv. Avoid collecting samples from ponded, sluggish or stagnant water.
- v. Avoid collecting samples directly downstream from a bridge as the samples can be affected by the bridge structure or runoff from the road surface.

Note, that depending upon the specific analytical test, some containers may contain preservatives. These containers should **never** be dipped into the stream, but filled indirectly from the collection container.

#### **7.7.7.2 Sample Handling**

Turbidity and pH measurements will be conducted immediately. Do not store turbidity or pH samples for later measurement.

Samples for laboratory analysis will be handled as follows. Immediately following sample collection:

- Cap sample containers;
- Complete sample container labels;
- Sealed containers in a re-sealable storage bag;
- Place sample containers into an ice-chilled cooler;
- Document sample information on the *Effluent Sampling Field Log Sheet*; and
- Complete the CoC.

All samples for laboratory analysis will be maintained between 0-6 degrees Celsius during delivery to the laboratory. Samples will be kept on ice, or refrigerated, from sample collection through delivery to the laboratory. Place samples to be shipped inside coolers with ice. Make sure the sample bottles are well packaged to prevent breakage and secure cooler lids with packaging tape.

Ship samples that will be laboratory analyzed to the analytical laboratory right away. Hold times are measured from the time the sample is collected to the time the sample is analyzed. The General Permit requires that samples be received by the analytical laboratory within 48 hours of the physical sampling (unless required sooner by the analytical laboratory).

Laboratory Name: (TBD) \_\_\_\_\_  
Address: \_\_\_\_\_  
City, State Zip: \_\_\_\_\_  
Telephone Number: \_\_\_\_\_  
Point of Contact: \_\_\_\_\_

### **7.7.7.3 Sample Documentation Procedures**

All original data documented on sample bottle identification labels, *Effluent Sampling Field Log Sheet*, and CoCs will be recorded using waterproof ink. These will be considered accountable documents. If an error is made on an accountable document, the individual will make corrections by lining through the error and entering the correct information. The erroneous information will not be obliterated. All corrections will be initialed and dated.

Duplicate samples will be identified consistent with the numbering system for other samples to prevent the laboratory from identifying duplicate samples. Duplicate samples will be identified in the *Effluent Sampling Field Log Sheet*.

Sample documentation procedures include the following:

Sample Bottle Identification Labels: Sampling personnel will attach an identification label to each sample bottle. Sample identification will uniquely identify each sample location.

Field Log Sheets: Sampling personnel will complete the *Effluent Sampling Field Log Sheet* and *Receiving Water Sampling Field Log Sheet* for each sampling event, as appropriate.

Chain of Custody: Sampling personnel will complete the CoC for each sampling event for which samples are collected for laboratory analysis. The sampler will sign the CoC when the sample(s) is turned over to the testing laboratory or courier.

## **7.8 ACTIVE TREATMENT SYSTEM MONITORING**

An Active Treatment System (ATS) will be deployed on the site?

☐ Yes ☒ No

This project does not require a project specific Sampling and Analysis Plan for an ATS because deployment of an ATS is not planned.

## **7.9 BIOASSESSMENT MONITORING**

This project is not subject to bioassessment monitoring because it is not a Risk Level 3 project.

## **7.10 WATERSHED MONITORING OPTION**

This project is not participating in a watershed monitoring option.

## **7.11 QUALITY ASSURANCE AND QUALITY CONTROL**

An effective Quality Assurance and Quality Control (QA/QC) plan will be implemented as part of the CSMP to ensure that analytical data can be used with confidence. QA/QC procedures to be initiated include the following:

- Field logs;
- Clean sampling techniques;
- CoCs;
- QA/QC Samples; and
- Data verification.

Each of these procedures is discussed in more detail in the following sections.

### **7.11.1 Field Logs**

The purpose of field logs is to record sampling information and field observations during monitoring that may explain any uncharacteristic analytical results. Sampling information to be included in the field log include the date and time of water quality sample collection, sampling personnel, sample container identification numbers, and types of samples that were collected. Field observations should be noted in the field log for any abnormalities at the sampling location (color, odor, BMPs, etc.). A Visual Inspection Field Log, an Effluent Sampling Field Log Sheet, are included in CSMP Attachment 3 “Example Forms”.

### **7.11.2 Clean Sampling Techniques**

Clean sampling techniques involve the use of certified clean containers for sample collection and clean powder-free nitrile gloves during sample collection and handling. As discussed in Section 7.7.7, adoption of a clean sampling approach will minimize the chance of field contamination and questionable data results.

### **7.11.3 Chain of Custody**

The sample CoC is an important documentation step that tracks samples from collection through analysis to ensure the validity of the sample. Sample CoC procedures include the following:

- Proper labeling of samples;
- Use of CoC forms for all samples; and
- Prompt sample delivery to the analytical laboratory.

Analytical laboratories usually provide CoC forms to be filled out for sample containers. An example CoC is included in CSMP Attachment 3 “Example Forms”.

### **7.11.4 QA/QC Samples**

QA/QC samples provide an indication of the accuracy and precision of the sample collection; sample handling; field measurements; and analytical laboratory methods. The following types of QA/QC will be conducted for this project:

- ☒ Field Duplicates at a frequency of 1 duplicate minimum per sampling event  
(Required for all sampling plans with field measurements or laboratory analysis)
- ☒ Travel Blanks at a frequency of 1 duplicate minimum per sampling event  
(Required for sampling plans that include VOC laboratory analysis)

#### **7.11.4.1 Field Duplicates**

Field duplicates provide verification of laboratory or field analysis and sample collection. Duplicate samples will be collected, handled, and analyzed using the same protocols as primary samples. The sample location where field duplicates are collected will be randomly selected from the discharge locations. Duplicate samples will be collected immediately after the primary sample has been collected. Duplicate samples will be collected in the same manner and as close in time as possible to the original sample. Duplicate samples will not influence any evaluations or conclusion.

#### **7.11.4.4 Travel Blanks**

Travel blanks assess the potential for cross-contamination of volatile constituents between sample containers during shipment from the field to the laboratory. De-ionized water blanks are taken along for the trip and held unopened in the same cooler with the VOC samples.

#### **7.11.5 Data Verification**

After results are received from the analytical laboratory, the QSP will verify the data to ensure that it is complete, accurate, and the appropriate QA/QC requirements were met. Data will be verified as soon as the data reports are received. Data verification will include:

- Check the CoC and laboratory reports.  
*Make sure all requested analyses were performed and all samples are accounted for in the reports.*
- Check laboratory reports to make sure hold times were met and that the reporting levels meet or are lower than the reporting levels agreed to in the contract.
- Check data for outlier values and follow up with the laboratory.  
*Occasionally typographical errors, unit reporting errors, or incomplete results are reported and should be easily detected. These errors need to be identified, clarified, and corrected quickly by the laboratory. The QSP should especially note data that is an order of magnitude or more different than similar locations, or is inconsistent with previous data from the same location.*
- Check laboratory QA/QC results.  
*EPA establishes QA/QC checks and acceptable criteria for laboratory analyses. These data are typically reported along with the sample results. The QSP will evaluate the reported QA/QC data to check for contamination (method, field, and equipment blanks), precision (laboratory matrix spike duplicates), and accuracy (matrix spikes and laboratory control samples). When QA/QC checks are outside acceptable ranges, the laboratory must flag the data, and usually provides an explanation of the potential impact to the sample results.*
- Check the data set for outlier values and, accordingly, confirm results and re-analyze samples where appropriate.  
*Sample re-analysis should only be undertaken when it appears that some part of the QA/QC resulted in a value out of the accepted range. Sample results may not be discounted unless the analytical laboratory identifies the required QA/QC criteria were not met and confirms this in writing.*

Field data including inspections and observations must be verified as soon as the field logs are received, typically at the end of the sampling event. Field data verification will include:

- Check field logs to make sure all required measurements were completed and appropriately documented;
- Check reported values that appear out of the typical range or inconsistent; Follow-up immediately to identify potential reporting or equipment problems, if appropriate, recalibrate equipment after sampling;
- Verify equipment calibrations;
- Review observations noted on the field logs; and
- Review notations of any errors and actions taken to correct the equipment or recording errors.

## **7.12 RECORDS RETENTION**

All records of stormwater monitoring information and copies of reports (including Annual Reports) must be retained for a period of at least three years from date of submittal or longer if required by the Regional Water Board.

Results of visual monitoring, field measurements, and laboratory analyses must be kept in the SWPPP along with CoCs, and other documentation related to the monitoring.

Records are to be kept onsite while construction is ongoing. Records to be retained include:

- The date, place, and time of inspections, sampling, visual observations, and/or measurements, including precipitation;
- The individual(s) who performed the inspections, sampling, visual observation, and/or field measurements;
- The date and approximate time of field measurements and laboratory analyses;
- The individual(s) who performed the laboratory analyses;
- A summary of all analytical results, the method detection limits and reporting limits, and the analytical techniques or methods used;
- Rain gauge readings from site inspections;
- QA/QC records and results;
- Calibration records;
- Visual observation and sample collection exemption records;
- The records of any corrective actions and follow-up activities that resulted from analytical results, visual observations, or inspections

## CSMP Attachment 1: Weather Reports

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## CSMP Attachment 2: Monitoring Records

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## CSMP Attachment 3: Example Forms

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## Rain Gauge Log Sheet

Construction Site Name:
-------------------------

WDID #: \_\_\_\_\_

[illegible]

**Risk Level 1, 2, 3  
Visual Inspection Field Log Sheet**

Date and Time of Inspection:				Report Date:		
Inspection Type:	<input type="checkbox"/> Weekly	<input type="checkbox"/> Before predicted rain	<input type="checkbox"/> During rain event	<input type="checkbox"/> Following qualifying rain event	<input type="checkbox"/> Contained stormwater release	<input type="checkbox"/> Quarterly non-stormwater
<b>Site Information</b>						
Construction Site Name:						
Construction stage and completed activities:					Approximate area of exposed site:	
<b>Weather and Observations</b>						
Date Rain Predicted to Occur:				Predicted % chance of rain:		
Estimate storm beginning: _____		Estimate storm duration: _____		Estimate time since last storm: _____		Rain gauge reading: _____
(date and time)		(hours)		(days or hours)		(inches)
Observations: If yes identify location						
Odors                      Yes <input type="checkbox"/> No <input type="checkbox"/>						
Floating material      Yes <input type="checkbox"/> No <input type="checkbox"/>						
Suspended Material   Yes <input type="checkbox"/> No <input type="checkbox"/>						
Sheen                    Yes <input type="checkbox"/> No <input type="checkbox"/>						
Discolorations        Yes <input type="checkbox"/> No <input type="checkbox"/>						
Turbidity               Yes <input type="checkbox"/> No <input type="checkbox"/>						
<b>Site Inspections</b>						
<b>Outfalls or BMPs Evaluated</b>			<b>Deficiencies Noted</b>			
(add additional sheets or attached detailed BMP Inspection Checklists)						
Photos Taken:	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Photo Reference IDs:			
<b>Corrective Actions Identified (note if SWPPP/REAP change is needed)</b>						
<b>Inspector Information</b>						
Inspector Name:				Inspector Title:		
Signature:					Date:	

**CHAIN-OF-CUSTODY****DATE:****Lab ID:**

<b>DESTINATION LAB:</b>  <b>ATTN:</b>  <b>ADDRESS:</b>  <b>Office Phone:</b> <b>Cell Phone:</b>							<b>REQUESTED ANALYSIS</b>				<b>Notes:</b>		
<b>SAMPLED BY:</b>													
<b>Contact:</b>													
<b>Project Name</b>													
<b>Client Sample ID</b>	<b>Sample Date</b>	<b>Sample Time</b>	<b>Sample Matrix</b>	<b>Container</b>									
				<b>#</b>	<b>Type</b>	<b>Pres.</b>							
<b>SENDER COMMENTS:</b>							<b>RELINQUISHED BY</b>						
							<b>Signature:</b> <b>Print:</b> <b>Company:</b> <b>Date:</b>						
<b>LABORATORY COMMENTS:</b>							<b>RECEIVED BY</b>						
							<b>Signature:</b> <b>Print:</b> <b>Company:</b> <b>Date:</b>						

## CSMP Attachment 4: Field Meter Instructions

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N/A – Not required



## Section 8      References

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Project Plans and Specifications - Construction drawings for Panoche Valley Solar, prepared by AMEC E & C Services, 1979 Lakeside Parkway, Suite 400, Tucker, GA 30084

State Water Resources Control Board (2009). Order 2009-0009-DWQ, NPDES General Permit No. CAS000002: National Pollutant Discharges Elimination System (NPDES) California General Permit for Storm Water Discharge Associated with Construction and Land Disturbing Activities. Available on-line at: [http://www.waterboards.ca.gov/water\\_issues/programs/stormwater/construction.shtml](http://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.shtml).

State Water Resources Control Board (2010). Order 2010-0014-DWQ, NPDES General Permit No. CAS000002: National Pollutant Discharges Elimination System (NPDES) California General Permit for Storm Water Discharge Associated with Construction and Land Disturbing Activities. Available on-line at: [http://www.waterboards.ca.gov/water\\_issues/programs/stormwater/construction.shtml](http://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.shtml).

CASQA 2009, *Stormwater BMP Handbook Portal: Construction*, November 2009, [www.casqa.org](http://www.casqa.org)

## Appendix A: Calculations

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## **APPENDIX D- CN CALCULATIONS**

The SCS Curve Number Loss method was used in the hydrologic model. Determination of curve numbers are based on observation of aerial imagery, Figure 2-1: Vegetative Cover Map from California Dept of Forestry and Fire Protection, 2002 and hydrologic soil groups per APPENDIX B - NRCS Web Soils Survey Report. Composite curve numbers are then calculated for each sub-basin.

In summary, the applicable curve numbers used in this report are:

<b>Cover Description</b>	<b>HSG</b>	<b>CN</b>	<b>Notes</b>
Roads, Posts, Concrete Pads & Footings	N/A	98	Per NRCS TR-55
Pasture, grassland or range - Poor	A	68	Refer to Table 9.1 in this report
Pasture, grassland or range - Poor	B	79	
Pasture, grassland or range - Poor	C	86	
Pasture, grassland or range - Poor	D	89	
Mountain brush mixture – Fair	B	48	Refer to Table 9.2 in this report
Mountain brush mixture – Fair	C	57	
Mountain brush mixture - Fair	D	63	
Disturbed Pervious	A	74	Refer to Section D.1 in this report
Disturbed Pervious	B	83	
Disturbed Pervious	C	89	
Disturbed Pervious	D	92	
Pond	N/A	100	Per Caltrans Table 819.7E

### **D.1 Disturbed Pervious Areas**

Disturbed Pervious areas are areas that will be disturbed by grading and construction activities but will remain pervious after construction. These areas are confined to the valley floor where the existing cover is characterized by pasture/grassland/range. Adjustments are made to the curve numbers to reflect compaction to the soils due to construction activities.

Using NRCS TR-55 equation,  $S = 1000/CN - 10$ , where  $S$  = potential maximum retention after runoff begins in inches and assuming  $S(\text{disturbed}) = 75\% \times S(\text{undisturbed})$

<b>CN (undisturbed)</b>	<b>S (undisturbed)</b>	<b>S (disturbed)</b>	<b>CN (disturbed)</b>
68	4.71	3.53	<b>74</b>
79	2.66	1.99	<b>83</b>
86	1.63	1.22	<b>89</b>
89	1.24	0.93	<b>92</b>



Table 9-1: NRCS TR-55 Runoff Curve Numbers For Other Agricultural Lands

Cover description		Curve numbers for hydrologic soil group			
Cover type	Hydrologic condition	A	B	C	D
Pasture, grassland, or range—continuous forage for grazing. <sup>2/</sup>	Poor	68	79	86	89
	Fair	49	69	79	84
	Good	39	61	74	80
Meadow—continuous grass, protected from grazing and generally mowed for hay.	—	30	58	71	78
Brush—brush-weed-grass mixture with brush the major element. <sup>2/</sup>	Poor	48	67	77	83
	Fair	35	56	70	77
	Good	30 <sup>2/</sup>	48	65	73
Woods—grass combination (orchard or tree farm). <sup>2/</sup>	Poor	57	73	82	86
	Fair	43	65	76	82
	Good	32	58	72	79
Woods. <sup>2/</sup>	Poor	45	66	77	83
	Fair	36	60	73	79
	Good	30 <sup>2/</sup>	55	70	77
Farmsteads—buildings, lanes, driveways, and surrounding lots.	—	59	74	82	86

<sup>1</sup> Average runoff condition, and  $I_a = 0.2S$ .  
<sup>2</sup> *Poor:* <50% ground cover or heavily grazed with no mulch.  
*Fair:* 50 to 75% ground cover and not heavily grazed.  
*Good:* > 75% ground cover and lightly or only occasionally grazed.

Table 9-2: NRCS TR-55 Runoff Curve Numbers for Arid and Semiarid Rangelands

Cover description		Curve numbers for hydrologic soil group			
Cover type	Hydrologic condition <sup>2/</sup>	A <sup>3/</sup>	B	C	D
Herbaceous—mixture of grass, weeds, and low-growing brush, with brush the minor element.	Poor		80	87	93
	Fair		71	81	89
	Good		62	74	85
Oak-aspen—mountain brush mixture of oak brush, aspen, mountain mahogany, bitter brush, maple, and other brush.	Poor		66	74	79
	Fair		48	57	63
	Good		30	41	48
Pinyon-juniper—pinyon, juniper, or both; grass understory.	Poor		75	85	89
	Fair		58	73	80
	Good		41	61	71
Sagebrush with grass understory.	Poor		67	80	85
	Fair		51	63	70
	Good		35	47	55
Desert shrub—major plants include saltbush, greasewood, creosotebush, blackbrush, bursage, palo verde, mesquite, and cactus.	Poor	63	77	85	88
	Fair	55	72	81	86
	Good	49	68	79	84

<sup>1</sup> Average runoff condition, and  $I_a = 0.2S$ . For range in humid regions, use table 2-2c.  
<sup>2</sup> *Poor:* <30% ground cover (litter, grass, and brush overstory).  
*Fair:* 30 to 70% ground cover.  
*Good:* > 70% ground cover.  
<sup>3</sup> Curve numbers for group A have been developed only for desert shrub.

All staff members are responsible for ensuring that they are using the correct revision of this document.

## D.2. Area Calculation for Posts and Fence Footings

The proposed impervious area (CN = 98) of the Panoche Valley Solar project site area is broken into five groups and an important note related to the panels;

- The posts that support the ground mount racking structures.
- The electrical equipment concrete spread foundation.
- The fence post footings.
- The impervious area required within the substation area.
- The internal gravel roads.

### Posts:

The solar panels on the site are assembled on ground mount racking structures. Each ground mount structure, as designed by Arraytech, is supported by a minimum of 15-W6x8.5 and 1-W6x15 structural posts. Array Technologies is a company based out of Albuquerque, NM that specializes in design and construction of solar panel ground mount racking structures (for further information about ArrayTech see, <http://arraytechinc.com/>). Each post will be driven into the ground with a pile driver. Therefore, the amount of impervious contributed to the site from each individual post is equivalent to the posts cross sectional area (see attached photocopied page from AISC with highlighted geometric properties for both the W6x8.5 and W6x15).

The impervious area from each individual post is small so, to create an easy way to determine the area from the total number of posts in each basin AMEC Civil has created a ratio. The area of posts per the area of ground mounts racking structures. Basically we take the area of one ground mount racking structures and then determine the area of posts per one racking structure. Once we have that ratio we look at the total area of ground mount racking structures in each basin then multiple by the ratio to determine the total impervious area from the posts in each basin.

### *Preliminary Ratio of Posts Area(PA) to Racking Structure Area (RSA):*

$$\text{Post} = 72 \text{ cm}^2$$

$$\text{Post} = 72 \text{ cm}^2 \times 0.155 \text{ in}^2 / 1 \text{ cm}^2 \times 1 \text{ ft}^2 / 144 \text{ in}^2$$

$$\text{Post} = 0.0775 \text{ ft}^2$$

$$\text{Post} = 0.0775 \text{ ft}^2 \times 1 \text{ acre} / 43560 \text{ ft}^2$$

$$\text{Post} = 1.779 \times 10^{-6} \text{ acre/post}$$

$$\text{Racking Structure} = 815 \text{ ft}^2 \times 1 \text{ acre} / 43560 \text{ ft}^2$$

$$\text{Racking Structure} = 1.872 \times 10^{-2} \text{ acre}$$

$$\text{PA/RSA} = (1.779 \times 10^{-6} \text{ acre/post} \times 5 \text{ posts}) / 1.872 \times 10^{-2} \text{ acre}$$

$$\text{PA/RSA} = 4.751 \times 10^{-8} \text{ acre/acre}$$

Each onsite post developed area for the proprietary posts are detailed on the CN tables within this appendix.

### Preliminary Electrical Equipment Concrete Spread Foundation:

The project site has approximately 113 electrical equipment concrete spread foundations placed at various locations throughout the site. Each electrical equipment concrete spread foundation is a rectangle with dimensions of 13 ft (width) by 30 ft (long).

$$\text{Area of Electrical Equipment Concrete Spread Foundation} = 13 \text{ ft} \times 30 \text{ ft} = 390 \text{ ft}^2$$

$$\text{Area of Electrical Equipment Concrete Spread Foundation} = 390 \text{ ft}^2 \times 1 \text{ acre} / 43560 \text{ ft}^2$$

$$\text{Area of Electrical Equipment Concrete Spread Foundation} = 8.953 \times 10^{-3} \text{ acre}$$

By taking the total number of skids in each basin we determine the amount of impervious contributed to the basin by computing the collective area of the skids. See each basin's respective CN table for the contribution of the electrical equipment concrete spread foundation area to the total impervious area.

#### Fence Post Footings:

A proposed perimeter security fence is to be in accordance with pre developed project boundary lines as determined by client, CDFW, and San Benito planning. The perimeter security fence shall be built to specifications set forth by AMEC Civil. The portion of the perimeter security fence that impacts the sites hydrology is the footing dimensions for each fence post.

Footing Dimensions/Area: Diameter of Footing = 2 ft

$$\text{Area of Footing} = \pi \text{Diameter}^2 / 4 = \pi 2 \text{ ft} \times 2 \text{ ft} / 4 = \text{ft}^2 \quad 3.14 \text{ ft}^2$$

#### Substation Area:

Approximately the entire area of the substation and switchyard areas will be considered impervious since the ground will either be covered by GAB, stone, or concrete foundations.

#### Internal Gravel Roads:

Internal gravel roads will be considered impervious since it will be surfaced by aggregate and compacted to 95% the maximum dry density as determined by the modified Proctor compaction test (SPMDD), ASTM D1557.

Table 9-3: Sub-Basin Composite CN

Sub-Basin:	1.0		
	CN	PRE Area (Acres)	POST Area (Acres)
Roads (Impervious)	98	3	46
Posts (Impervious)	98	0	0.075
Concrete Pads & Footings (Imp)	98	0	0.410
Pasture, grassland or range - HSG A	68	2,082	1,971
Pasture, grassland or range - HSG B	79	225	225
Pasture, grassland or range - HSG D	89	268	268
Disturbed (Pervious) – HSG A	74	0	60
Pond	100	0	2
<b>Total area =</b>		<b>2,578</b>	<b>2,578</b>
<b>Composite CN =</b>		<b>71.2</b>	<b>71.9</b>
		0.10% imp.	1.82% imp.

Sub-Basin:	1.1		
	CN	PRE Area (Acres)	POST Area (Acres)
Roads (Impervious)	98	1	1
Pasture, grassland or range - HSG A	68	187	187
Pasture, grassland or range - HSG B	79	0	0
Pasture, grassland or range - HSG D	89	62	62
<b>Total area =</b>		<b>249</b>	<b>249</b>
<b>Composite CN =</b>		<b>73.3</b>	<b>73.3</b>
		0.20% imp.	

Sub-Basin:	1.2		
	CN	PRE Area (Acres)	POST Area (Acres)
Pasture, grassland or range - HSG A	68	294	294
Pasture, grassland or range - HSG B	79	231	231
Pasture, grassland or range - HSG C	86	1,074	1,074
Pasture, grassland or range - HSG D	89	1,071	1,071
Mountain brush mixture (Fair) - HSG D	63	252	252
<b>Total area =</b>		<b>2,922</b>	<b>2,922</b>
<b>Composite CN =</b>		<b>82.7</b>	<b>82.7</b>

Sub-Basin:	1.2a		
	CN	PRE Area (Acres)	POST Area (Acres)
Pasture, grassland or range - HSG A	68	600	600
Pasture, grassland or range - HSG B	79	133	133
Pasture, grassland or range - HSG C	86	783	783
Pasture, grassland or range - HSG D	89	552	552
<b>Total area =</b>		<b>2,069</b>	<b>2,069</b>
<b>Composite CN =</b>		<b>81.1</b>	<b>81.1</b>

Sub-Basin:	1.2b		
	CN	PRE Area (Acres)	POST Area (Acres)
Mountain brush mixture (Fair) - HSG B	48	472	472
Mountain brush mixture (Fair) - HSG C	57	3,690	3,690
Mountain brush mixture (Fair) - HSG D	63	10,032	10,032
<b>Total area =</b>		<b>14,195</b>	<b>14,195</b>
<b>Composite CN =</b>		<b>60.9</b>	<b>60.9</b>

Sub-Basin:	1.2d		
	CN	PRE Area (Acres)	POST Area (Acres)
Pasture, grassland or range - HSG A	68	53	53
Pasture, grassland or range - HSG B	79	105	105
Pasture, grassland or range - HSG D	89	585	585
Mountain brush mixture (Fair) - HSG D	63	146	146
<b>Total area =</b>		<b>889</b>	<b>889</b>
<b>Composite CN =</b>		<b>82.3</b>	<b>82.3</b>

Sub-Basin:	1.2e		
	CN	PRE Area (Acres)	POST Area (Acres)
Pasture, grassland or range - HSG A	68	182	182
Pasture, grassland or range - HSG B	79	230	230
Pasture, grassland or range - HSG C	86	55	55
Mountain brush mixture (Fair) - HSG B	48	137	137
Mountain brush mixture (Fair) - HSG D	63	2,382	2,382
<b>Total area =</b>		<b>2,987</b>	<b>2,987</b>
<b>Composite CN =</b>		<b>64.3</b>	<b>64.3</b>

Sub-Basin:	1.2g		
	CN	PRE Area (Acres)	POST Area (Acres)
Pasture, grassland or range - HSG A	68	482	482
Pasture, grassland or range - HSG D	89	159	159
Mountain brush mixture (Fair) - HSG D	63	1,943	1,943
<b>Total area =</b>		<b>2,584</b>	<b>2,584</b>
<b>Composite CN =</b>		<b>65.5</b>	<b>65.5</b>

Sub-Basin:	1.2h		
	CN	PRE Area (Acres)	POST Area (Acres)
Pasture, grassland or range - HSG A	68	7	7
Pasture, grassland or range - HSG B	79	264	264
Pasture, grassland or range - HSG C	86	167	167
Pasture, grassland or range - HSG D	89	209	209
Mountain brush mixture (Fair) - HSG C	57	290	290
Mountain brush mixture (Fair) - HSG D	63	657	657
<b>Total area =</b>		<b>1,593</b>	<b>1,593</b>
<b>Composite CN =</b>		<b>70.4</b>	<b>70.4</b>

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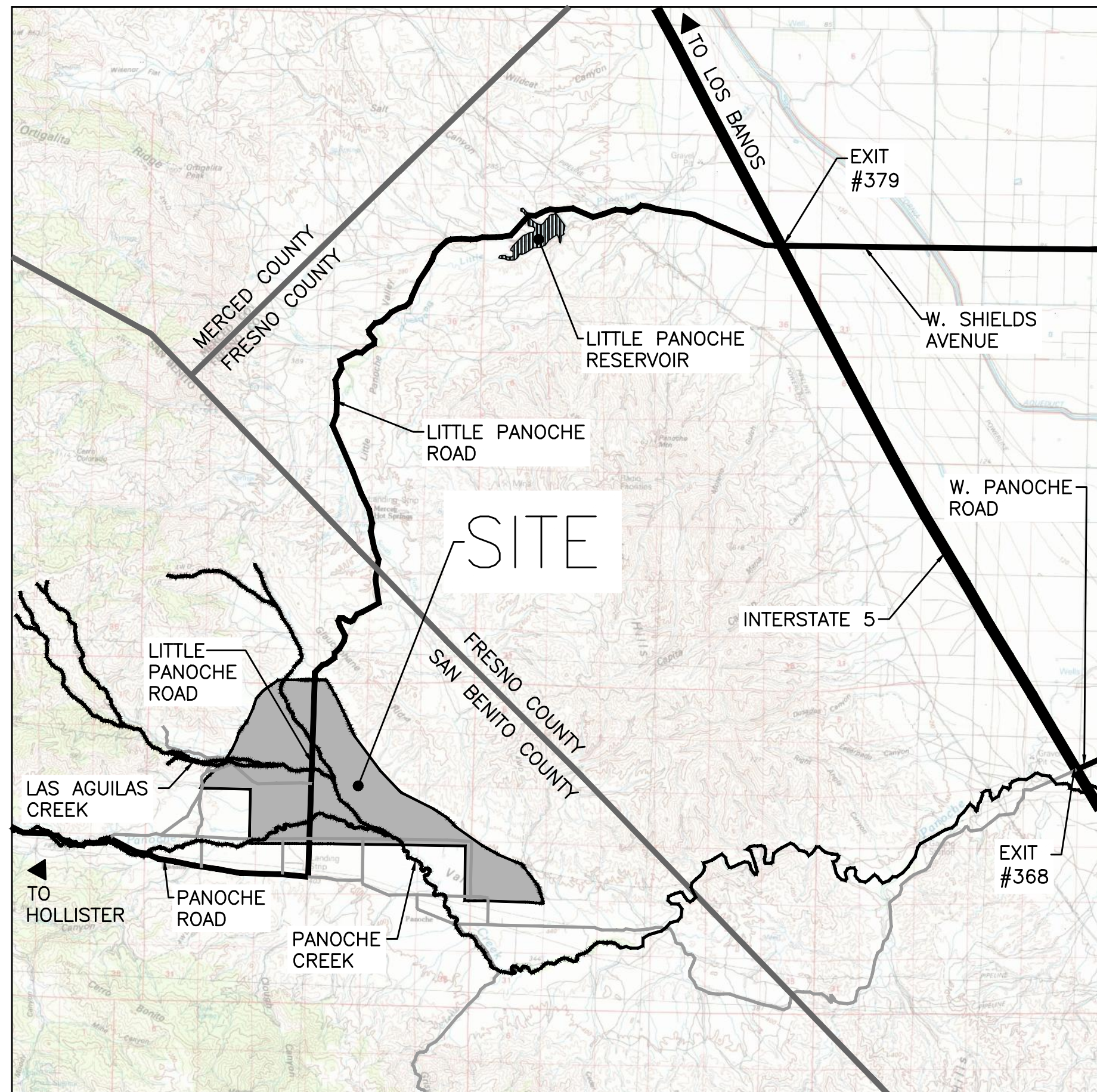
## Appendix B: Site Maps

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LAS AGUILAS AND PANOCHE BRIDGE, CIVIL DRAWING INDEX	
DWG #	DRAWING TITLE
D-000-C-0301	GENERAL PLAN AND ELEVATION
D-000-C-0302	GENERAL NOTES AND QUANTITIES
D-000-C-0303	PILE LAYOUT AND ROCK SLOPE PROTECTION DETAILS
D-000-C-0304	GENERAL NOTES FOR BOX BEAMS
D-000-C-0305	LAS AGUILAS CREEK BOX BEAM
D-000-C-0306	PANOCHE CREEK BOX BEAM
D-000-C-0307	BOX BEAM DETAILS
D-000-C-0308	BOX BEAM DIAPHRAGM
D-000-C-0309	ABUTMENT DETAILS 1
D-000-C-0310	ABUTMENT DETAILS 2
D-000-C-0311	GUARDRAIL SYSTEM GENERAL NOTES
D-000-C-0312	GUARDRAIL SYSTEM DETAILS 1
D-000-C-0313	GUARDRAIL SYSTEM DETAILS 2
D-000-C-0314	GUARDRAIL SYSTEM DETAILS 3



VICINITY MAP  
SCALE: 1" = 1500'

CIVIL DRAWING INDEX	
DWG #	DRAWING TITLE
D-000-C-0151	PERIMETER ROAD DETAILS - OVERALL HYDRAULICS PLAN
D-000-C-0152	PERIMETER ROAD DETAILS - OPEN CHANNEL DETAILS
D-000-C-0154	PERIMETER ROAD DETAILS - CROSSING 12
D-000-C-0155	PERIMETER ROAD DETAILS - CROSSING 14
D-000-C-0156	PERIMETER ROAD DETAILS - CROSSING 16
D-000-C-0157	PERIMETER ROAD DETAILS - CROSSING 17
D-000-C-0158	PERIMETER ROAD DETAILS - CROSSING 19
D-000-C-0159	PERIMETER ROAD DETAILS - CROSSING 21
D-000-C-0160	PERIMETER ROAD DETAILS - CROSSING 22 AND 23
D-000-C-0171	PERIMETER ROAD DETAILS - LOW WATER CROSSING DETAILS
D-000-C-0172	PERIMETER ROAD DETAILS - CROSSING 7
D-000-C-0173	PERIMETER ROAD DETAILS - CROSSING 10.1
D-000-C-0174	PERIMETER ROAD DETAILS - CROSSING 13
D-000-C-0175	PERIMETER ROAD DETAILS - CROSSING 14.1
D-000-C-0176	PERIMETER ROAD DETAILS - CROSSING 16.1
D-000-C-0177	PERIMETER ROAD DETAILS - CROSSING 19.1
D-000-C-0178	PERIMETER ROAD DETAILS - CROSSING 20
D-000-C-0179	PERIMETER ROAD DETAILS - CROSSING 20.1
D-000-C-0180	PERIMETER ROAD DETAILS - CROSSING 23.1
D-000-C-0182	PERIMETER ROAD DETAILS - CROSSING 25
D-000-C-0183	PERIMETER ROAD DETAILS - CROSSING 25.1
D-000-C-0184	PERIMETER ROAD DETAILS - CROSSING 25.2 & 25.3
D-000-C-0185	PERIMETER ROAD DETAILS - CROSSING 3 & 30
D-000-C-0186	PERIMETER ROAD DETAILS - CROSSING 5.1
D-000-C-0187	PERIMETER ROAD DETAILS - CROSSING 4
D-000-C-0188	PERIMETER ROAD DETAILS - CROSSING 38 & 38A
D-000-C-0189	PERIMETER ROAD DETAILS - CROSSING 39
D-000-C-0190	PERIMETER ROAD DETAILS - CROSSING 40 & 41
D-000-C-0201	PRE-DEVELOPMENT HYDROLOGY PLAN
D-000-C-0202	POST-DEVELOPMENT HYDROLOGY PLAN
D-000-C-0205	DETENTION BASIN PLANS & DETAILS - POND #3

CIVIL DRAWING INDEX	
DWG #	DRAWING TITLE
D-000-C-0001	COVER SHEET AND LOCATION PLAN
D-000-C-0002	INDEX SHEET, GENERAL NOTES, AND LEGEND
D-000-C-0003	KEY PLAN
D-000-C-0011	GRADING, DRAINAGE, AND SEDIMENT / EROSION CONTROL PLAN
D-000-C-0012	GRADING, DRAINAGE, AND SEDIMENT / EROSION CONTROL PLAN
D-000-C-0013	GRADING, DRAINAGE, AND SEDIMENT / EROSION CONTROL PLAN
D-000-C-0014	GRADING, DRAINAGE, AND SEDIMENT / EROSION CONTROL PLAN
D-000-C-0015	GRADING, DRAINAGE, AND SEDIMENT / EROSION CONTROL PLAN
D-000-C-0016	GRADING, DRAINAGE, AND SEDIMENT / EROSION CONTROL PLAN
D-000-C-0017	GRADING, DRAINAGE, AND SEDIMENT / EROSION CONTROL PLAN
D-000-C-0018	GRADING, DRAINAGE, AND SEDIMENT / EROSION CONTROL PLAN
D-000-C-0019	GRADING, DRAINAGE, AND SEDIMENT / EROSION CONTROL PLAN
D-000-C-0020	GRADING, DRAINAGE, AND SEDIMENT / EROSION CONTROL PLAN
D-000-C-0021	GRADING, DRAINAGE, AND SEDIMENT / EROSION CONTROL PLAN
D-000-C-0022	GRADING, DRAINAGE, AND SEDIMENT / EROSION CONTROL PLAN
D-000-C-0023	GRADING, DRAINAGE, AND SEDIMENT / EROSION CONTROL PLAN
D-000-C-0024	GRADING, DRAINAGE, AND SEDIMENT / EROSION CONTROL PLAN
D-000-C-0025	GRADING, DRAINAGE, AND SEDIMENT / EROSION CONTROL PLAN
D-000-C-0026	GRADING, DRAINAGE, AND SEDIMENT / EROSION CONTROL PLAN
D-000-C-0071	EROSION CONTROL NOTES & DETAILS
D-000-C-0072	EROSION CONTROL NOTES & DETAILS
D-000-C-0073	EROSION CONTROL NOTES & DETAILS
D-000-C-0074	EROSION CONTROL NOTES & DETAILS
D-000-C-0081	GENERAL DETAILS - PERIMETER FENCE
D-000-C-0082	GENERAL DETAILS - PERIMETER FENCE
D-000-C-0083	GENERAL DETAILS - PERIMETER FENCE POST LOCATIONS AT AC TRENCHES
D-000-C-0084	GENERAL DETAILS - SITE DETAILS
D-000-C-0085	GENERAL DETAILS - SITE DETAILS
D-000-C-0086	GENERAL DETAILS - MISC
D-000-C-0087	GENERAL DETAILS - MISC
D-000-C-0088	GENERAL DETAILS - MISC
D-000-C-0089	GENERAL DETAILS - MISC
D-000-C-0091	SUBSTATION AREA AND OPERATIONS BUILDING DETAIL
D-000-C-0096	CONSTRUCTION TRAILER AREA DETAIL
D-000-C-0097	CONSTRUCTION TRAILER AREA SEPTIC DETAILS
D-000-C-0098	CONSTRUCTION WATER POND DETAILS AND WELL LOCATIONS
D-000-C-0101	CIVIL - OVERALL SITE LAYOUT
D-000-C-0111	CIVIL - DEMOLITION PLAN
D-000-C-0121	PERIMETER ROAD PLAN AND PROFILES - EAST SIDE GEOMETRY TABLE
D-000-C-0122	PERIMETER ROAD PLAN AND PROFILES - EAST SIDE
D-000-C-0123	PERIMETER ROAD PLAN AND PROFILES - EAST SIDE
D-000-C-0124	PERIMETER ROAD PLAN AND PROFILES - EAST SIDE
D-000-C-0125	PERIMETER ROAD PLAN AND PROFILES - EAST SIDE
D-000-C-0126	PERIMETER ROAD PLAN AND PROFILES - EAST SIDE
D-000-C-0127	PERIMETER ROAD PLAN AND PROFILES - EAST SIDE
D-000-C-0128	PERIMETER ROAD PLAN AND PROFILES - EAST SIDE
D-000-C-0129	PERIMETER ROAD PLAN AND PROFILES - EAST SIDE
D-000-C-0130	PERIMETER ROAD PLAN AND PROFILES - EAST SIDE
D-000-C-0131	PERIMETER ROAD PLAN AND PROFILES - EAST SIDE
D-000-C-0132	PERIMETER ROAD PLAN AND PROFILES - EAST SIDE
D-000-C-0133	PERIMETER ROAD PLAN AND PROFILES - WEST SIDE GEOMETRY TABLE
D-000-C-0134	PERIMETER ROAD PLAN AND PROFILES - WEST SIDE
D-000-C-0135	PERIMETER ROAD PLAN AND PROFILES - WEST SIDE
D-000-C-0136	PERIMETER ROAD PLAN AND PROFILES - WEST SIDE
D-000-C-0137	PERIMETER ROAD PLAN AND PROFILES - WEST SIDE
D-000-C-0138	PERIMETER ROAD PLAN AND PROFILES - WEST SIDE
D-000-C-0139	PERIMETER ROAD PLAN AND PROFILES - WEST SIDE
D-000-C-0140	PERIMETER ROAD PLAN AND PROFILES - WEST SIDE
D-000-C-0141	PERIMETER ROAD PLAN AND PROFILES - WEST SIDE
D-000-C-0142	PERIMETER ROAD PLAN AND PROFILES - WEST SIDE
D-000-C-0143	PERIMETER ROAD PLAN AND PROFILES - WEST SIDE
D-000-C-0144	PERIMETER ROAD PLAN AND PROFILES - WEST SIDE
D-000-C-0145	PERIMETER ROAD PLAN AND PROFILES - WEST SIDE (DELETED)
D-000-C-0146	NEW VASQUEZ CREEK ROAD PLAN

PROJECT ADDRESS: 721 LITTLE PANOCHE ROAD  
PAICINES, CA 95043

PROJECT OWNER: PANOCHE VALLEY SOLAR, LLC  
845 OAK GROVE AVE., SUITE 202  
MENLO PARK, CA 94025

RECORD OWNER: PANOCHE VALLEY SOLAR, LLC  
845 OAK GROVE AVE., SUITE 202  
MENLO PARK, CA 94025

OWNER CONTACT: ERIC CHERNISS  
PHONE (408) 460-8200  
EMAIL eric@pv2energy.com

CONSTRUCTION MANAGER: AMEC FOSTER WHEELER  
WAYNE HAFF  
1799 LAKESIDE PARKWAY, SUITE 400  
TUCKER, GA 30084  
PHONE (518) 260-5740  
FAX (770) 688-2501  
EMAIL wayne.half@amecfw.com

SITE MANAGER: AMEC FOSTER WHEELER  
NATHAN FEATHERSTONE  
1979 LAKESIDE PARKWAY, SUITE 400  
TUCKER, GA 30084  
PHONE (648) 688-9071  
EMAIL [nathan.featherstone@amecfw.com](mailto:nathan.featherstone@amecfw.com)

ENGINEERING MANAGER: AMEC FOSTER WHEELER  
HEATHER MUNOZ  
COLORADO CENTER  
TOWER 2, 2000 S COLORADO BLVD, 10TH FLOOR  
DENVER, CO 80222  
PHONE (303) 630-0773  
EMAIL [heather.munoz@amecfw.com](mailto:heather.munoz@amecfw.com)

CIVIL ENGINEER: AMEC FOSTER WHEELER  
MATTHEW GILL, PE 84621  
1979 LAKESIDE PARKWAY, SUITE 400  
TUCKER, GA 30084  
PHONE (770) 688-2500  
FAX (770) 688-2501  
EMAIL [matthew.gill@amecfw.com](mailto:matthew.gill@amecfw.com)

BIOLOGY MANAGER: AMEC FOSTER WHEELER  
ANGIE HARBIN-IRELAND  
9210 SKY PARK COURT, SUITE 200  
SAN DIEGO, CA 92123  
PHONE (858) 300-4338  
EMAIL [angie.harbin-ireland@amecfw.com](mailto:angie.harbin-ireland@amecfw.com)

SOILS ENGINEER: KLIENFELDER  
ADAM D. TSCHIDA, PE  
1801 CALIFORNIA STREET, SUITE 1100  
DENVER, CO 80202  
PHONE (303) 237-6601  
FAX (303) 237-6601

IMPROVEMENT PLANS APPROVED: SAN BENITO COUNTY DEPT OF PUBLIC WORKS	
COUNTY ENGINEER (ARMAN NAZEMI C.E. 55927)	DATE

[illegible]





### SEDIMENTATION & EROSION CONTROL NOTES

- ## CONSTRUCTION PRACTICES

1. CONSTRUCTION ACTIVITY AND EQUIPMENT MAINTENANCE IS LIMITED TO THE HOURS BETWEEN 7:00 A.M. AND DUSK ON WEEKDAYS. CONSTRUCTION MAY NOT OCCUR ON WEEKENDS OR STATE HOLIDAYS, WITHOUT PRIOR CONSENT OF THE BUILDING OFFICIAL. NON-NOISE GENERATING ACTIVITIES (E.G. INTERIOR PAINTING) ARE NOT SUBJECT TO THESE RESTRICTIONS.
2. STATIONED CONSTRUCTION EQUIPMENT THAT GENERATES NOISE IN EXCESS OF 65 DBA AT THE PROJECT LOCATIONS MUST BE SHIELDED AND LOCATED AT LEAST 100 FEET FROM OCCUPIED RESIDENCES. THE EQUIPMENT AREA WITH APPROPRIATE ACOUSTIC SHIELDING SHALL BE DESIGNATED ON BUILDING AND GRADING PLANS. EQUIPMENT AND SHIELDING SHALL REMAIN IN THE DESIGNATED LOCATION THROUGHOUT CONSTRUCTION ACTIVITIES.
3. CONSTRUCTION ROUTES ARE LIMITED TO SAN BENITO COUNTY APPROVED TRUCK ROUTES.
4. WATER TRUCKS OR SPRINKLER SYSTEMS SHALL BE USED DURING CLEARING, GRADING, EARTH MOVING, EXCAVATION, OR TRANSPORTATION OF CUT OR FILL MATERIALS TO PREVENT DUST FROM LEAVING THE SITE AND TO CREATE A CRUST AFTER EACH DAY'S ACTIVITIES CEASE. AT A MINIMUM, THIS WOULD INCLUDE WETTING DOWNS SUCH AREAS IN THE LATER MORNING AND AFTER WORK IS COMPLETED FOR THE DAY AND WHENEVER WIND EXCEEDS 15 MILES PER HOUR.
5. A PERSON OR PERSONS SHALL BE DESIGNATED TO MONITOR THE DUST CONTROL PROGRAM AND TO ORDER INCREASING WATERING AS NECESSARY TO PREVENT TRANSPORT OF DUST OFF-SITE. THE NAME AND TELEPHONE NUMBER OF SUCH PERSON(S) SHALL BE PROVIDED TO THE COUNTY.
6. ALL GRADING EQUIPMENT SHALL BE KEPT IN GOOD WORKING ORDER PER FACTORY SPECIFICATIONS.

### CONSTRUCTION ACTIVITY

1. THE CONTRACTOR SHALL PROVIDE VERIFICATION THAT ALL CONSTRUCTION EQUIPMENT IS IN PROPER TUNE PER THE MANUFACTURER'S RECOMMENDATION.
2. ROLL OFF TRASH BINS AND CHEMICAL TOILETS FOR CONSTRUCTION WORKERS SHALL BE REQUIRED ON ALL CONSTRUCTION SITES AND TEMPORARY FENCING PROVIDED AROUND THE CONSTRUCTION SITES AND/OR A ROW OF TEMPORARY FENCING PROVIDED AT SUCH LOCATION AS TO PREVENT ANY BUILDING MATERIALS FROM BLOWING OFF THE CONSTRUCTION SITE.
3. DURING THOSE PERIODS WHEN GRADING IS BEING CONDUCTED, THE CONTRACTOR SHALL INSPECT THE ADJACENT PAVED ROADWAYS AT LEAST TWO TIMES PER WEEK, AND SHALL SWEEP THE STREET IF VISIBLE DIRT OR DUST, ATTRIBUTABLE TO THE PROJECT, CAN BE SEEN ON THE ROADWAY.
4. ALL TRASH CONTAINERS ARE TO BE COVERED AT THE END OF EACH DAY AND BEFORE RAIN.
5. PRIOR TO GROUND DISTURBANCE OF ANY KIND, THE PROJECT WORK AREAS SHALL BE CLEARLY DELINEATED BY STAKES, FLAGS, OR OTHER CLEARLY IDENTIFIABLE SYSTEM.
6. ALL GENERAL TRASH AND OTHER HUMAN-GENERATED DEBRIS WILL BE STORED IN ANIMAL PROOF CONTAINERS AND/OR REMOVED FROM THE SITE EACH DAY. NO DELIBERATE FEEDING OF WILDLIFE.
7. ALL PIPES, CONDUITS, CULVERTS, OR SIMILAR ITEMS WITH A DIAMETER OF GREATER THAN ONE INCH SHALL BE DELIVERED TO THE SITE CAPPED OR TAPED CLOSED. IN THE EVENT A PIPE IS INADVERTENTLY LEFT OPEN, THE PIPE SHALL BE INSPECTED BY A BIOLOGICAL MONITOR PRIOR TO MOVING, CAPPING, OR TAPING. CAPS AND TAPE SHALL BE REMOVED DURING INSTALLATION.
8. THE SPEED LIMIT ON SITE SHALL NOT EXCEED 15 MILES PER HOUR.
9. NO VEHICLES OR EQUIPMENT SHALL BE REFUELED WITHIN 100 FEET OF AN EPHEMERAL DRAINAGE OR WETLAND UNLESS BERMED AND LINED REFUELING AREA IS CONSTRUCTED.

### EARTHWORK & DRAINAGE NOTES

1. ALL STUMPS AND ROOTS LARGER THAN 2 INCHES IN DIAMETER SHALL BE COMPLETELY GRUBBED AND REMOVED. SURFACE VEGETATION SHALL BE REMOVED COMPLETE WITH ROOTS UP TO A DEPTH OF 24 INCHES. ALL VEGETATION SHALL BECOME PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF IN ACCORDANCE WITH LOCAL AND STATE REGULATION. ANY ONSITE DISPOSAL WORK SHALL BE APPROVED IN ADVANCE BY THE OWNER.
2. SPOT ELEVATIONS AND CONTOURS ON THESE DRAWINGS ARE TOP OF FINISHED GRADE. SUBTRACT FINISH SURFACING MATERIAL THICKNESS TO OBTAIN TOP OF SUBGRADE. GRADE SHALL SLOPE UNIFORMLY BETWEEN CONTOURS AND FINISH SPOT ELEVATIONS SHOWN ON THE PLANS.
3. IF NEEDED, FINISH GRADE TIE-IN'S INTO EXISTING GRADE OUTSIDE OF AREAS OF TRACKER ARRAYS AND PERIMETER ACCESS MAY BE AT A SLOPE OF 8 FEET HORIZONTAL TO 1 FOOT VERTICAL, UNLESS NOTED OTHERWISE ON PLANS. STEEPER SLOPE AT EXISTING GRADE TIE-IN'S WILL BE ALLOWED AT THE DISCRETION OF THE SITE SUPERVISOR. MAX SLOPE ON SITE SHALL BE 3 FEET HORIZONTAL TO 1 FOOT VERTICAL.
4. REFER TO REVISED GEOTECHNICAL EVALUATION, BY KLEINFELDER DATED DECEMBER 9, 2014, FOR GENERAL EARTHWORK AND GRADING RECOMMENDATIONS.
5. APPLICABLE WIND EROSION AND FUGITIVE DUST CONTROL REQUIREMENTS SHALL BE IN ACCORDANCE WITH THE PVS LLC - PANOCHÉ VALLEY SOLAR - WIND EROSION PROTECTION AND FUGITIVE DUST CONTROL PLAN, DOCUMENT NO. C-RPT-000-003.
6. ALL POND OUTLET STRUCTURES AND ASSOCIATED PIPES SHALL BE CLEANED OUT PRIOR TO DEMOBILIZATION SUCH THAT THE SEDIMENT DEPTH IS LESS THAN 10% OF THE PIPE DIAMETER.
7. PROJECT SITE IS LOCATED IN FLOODPLAIN ZONE X, WITH AREAS OF ZONE A AROUND THE WATERWAYS THROUGH THE SITE. REFER TO FEMA FIRMS FM06089C0425D, FM06089C0450D, FM06089C050D, AND FM06089C057D.
8. GENERAL GRADING CONCEPT IS TO MAINTAIN EXISTING TOPOGRAPHY IN ITS NATURAL DRAINAGE PATTERN.
9. PRECONSTRUCTION SURVEYS FOR THREATENED AND ENDANGERED SPECIES SHALL BE MADE BY THE SITE BIOLOGISTS PRIOR TO EARTH DISTURBING ACTIVITIES AS REQUIRED IN THE MMP.

1. CONSTRUCTION SEQUENCE SHALL BE SCHEDULED TO MINIMIZE UNCONTROLLED RUNOFF AND OFFSITE SEDIMENTATION DURING GRADING OPERATIONS. SEDIMENTATION BARRIERS SHALL BE INSTALLED IN EACH AREA BEFORE GRADING OPERATIONS. ALL DISTURBED AREAS SHALL BE RE-VEGETATED IN ACCORDANCE WITH RE-VEGETATION REPORT.
2. REMOVAL OF VEGETATION SHALL BE LIMITED TO AREAS CRITICAL TO CONDUCTING THE CONSTRUCTIONS WORKS. REFER TO DRAWINGS D-000-C-0011 THROUGH D-000-C-0026 FOR LIMITS OF CONSTRUCTION AND PRESERVATION OF EXISTING VEGETATION.
3. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED PRIOR TO AND MAINTAINED DURING THE CONSTRUCTION PHASES UNTIL FINAL STABILIZATION.
4. CONTRACTOR SHALL MONITOR THE WEATHER SEVERAL DAYS IN ADVANCE TO ENSURE THAT WORKS ARE CONDUCTED DURING FAVORABLE WEATHER CONDITIONS. SHOULD AN UNEXPECTED RAIN EVENT ARISE, PROTECT THE SITE TO ENSURE NO DISCHARGE OF DELETERIOUS MATERIALS OFF-SITE.
4. ALL TEMPORARY STOCKPILES SHALL BE PROTECTED BY INSTALLING AND MAINTAINING SEDIMENTATION BARRIERS AROUND THE PERIMETER. CONTRACTOR SHALL REFER TO EROSION AND SEDIMENT CONTROL DETAIL 8, WM-03, ON DRAWING D-000-C-0072.
6. ALL ENTRANCES INTO PROJECT SHALL HAVE STABILIZED CONSTRUCTION ENTRANCE/EXIT, TC-1.
7. ADDITIONAL MEASURES MAY BE REQUIRED DURING CONSTRUCTION TO CONTROL EROSION AND SEDIMENTATION CAUSED BY CONSTRUCTION ACTIVITIES. CONTRACTOR SHALL COMPLY WITH THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP), C-RPT-000-001, PREPARED FOR THE SITE.
8. CONTRACTOR MAY INTERCHANGE SEDIMENTATION BARRIER METHODS, WATTLES WITH SILT FENCE, IF DEEMED NECESSARY. A QUALIFIED DEVELOPER'S APPROVAL OF THE SWPPP IS REQUIRED FOR INTERCHANGE OF SEDIMENTATION BARRIER METHODS.
9. ALL SEDIMENT AND EROSION CONTROL MEASURES SHOWN ON PLANS ARE IDENTIFIED WITH THE NOMENCLATURE DERIVED FROM CASQA BMP HANDBOOK.
10. "NOTICE OF TERMINATION" (NOT) SHOULD BE SUBMITTED WITHIN 90 DAYS OF MEETING ALL GENERAL PERMIT REQUIREMENTS TO TERMINATION.

### ROADS & SURFACING NOTES

1. PRIVATE ACCESS ROADS FOR THE PROJECT HAVE BEEN DESIGNED TO ALLOW SHEET FLOW TO PASS ACROSS THE ROAD WAY TO MAINTAIN THE NATURAL DRAINAGE PATTERN OF THE SITE AS MUCH AS FEASIBLE, UNLESS NOTED OTHERWISE.
2. SMOOTH VERTICAL TRANSITION'S SHALL BE PROVIDED AT ROAD INTERSECTIONS.
3. SEE CONSTRUCTION PLANS AND DETAILS FOR ROAD LAYOUT, GUIDELINES, AND GRADES.
4. EXISTING ROADWAY AND ROW INFORMATION INDICATED ON THESE DRAWINGS ARE BASED UPON INFORMATION AVAILABLE AT THE TIME OF DRAWING PREPARATION. NO GUARANTEE IS MADE OR INTENDED AS TO THE ACCURACY OF THIS INFORMATION.

**DESERT AREA FIRE HAZARD ABATEMENT NOTES:**

1. ALL COMBUSTIBLE VEGETATION SHALL BE REMOVED A MINIMUM DISTANCE OF THIRTY FEET FROM ALL STRUCTURES OR TO THE PROPERTY LINE, WHICHEVER IS LESS, PER THE REQUIREMENTS OF CALIFORNIA PUBLIC RESOURCE CODE 4291.
  - 1.1. COMBUSTIBLE VEGETATION INCLUDES, BUT IS NOT LIMITED TO:
    - 1.1.1. TUMBLEWEEDS (RUSSIAN THISTLE)
    - 1.1.2. LIMB AND DEBRIS OF SALT CEDAR (TAMARISK) WITHIN SIX FEET OF THE GROUND
    - 1.1.3. PLANTS, UNLESS PRUNED TO REMOVE DEAD MATERIAL
    - 1.1.4. GRASS OVER FOUR INCHES IN HEIGHT

PROJECT STUDIES AND REPORTS:

- |                  |  |
|------------------|--|
| 1. C-STY-000-001 | STREAM CROSSING STUDY  |
| 2. C-RPT-000-001 | SWPPP/NOI  |
| 3. C-RPT-000-002 | HYDROLOGY/HYDRAULICS REPORT                                  |
| 4. C-RPT-000-003 | DUST CONTROL PLAN AND NOTES                                  |
| 5. C-RPT-100-004 | HYDROLOGY REPORT - LAS AGUILAS SWITCHING STATION (BY OTHERS) |

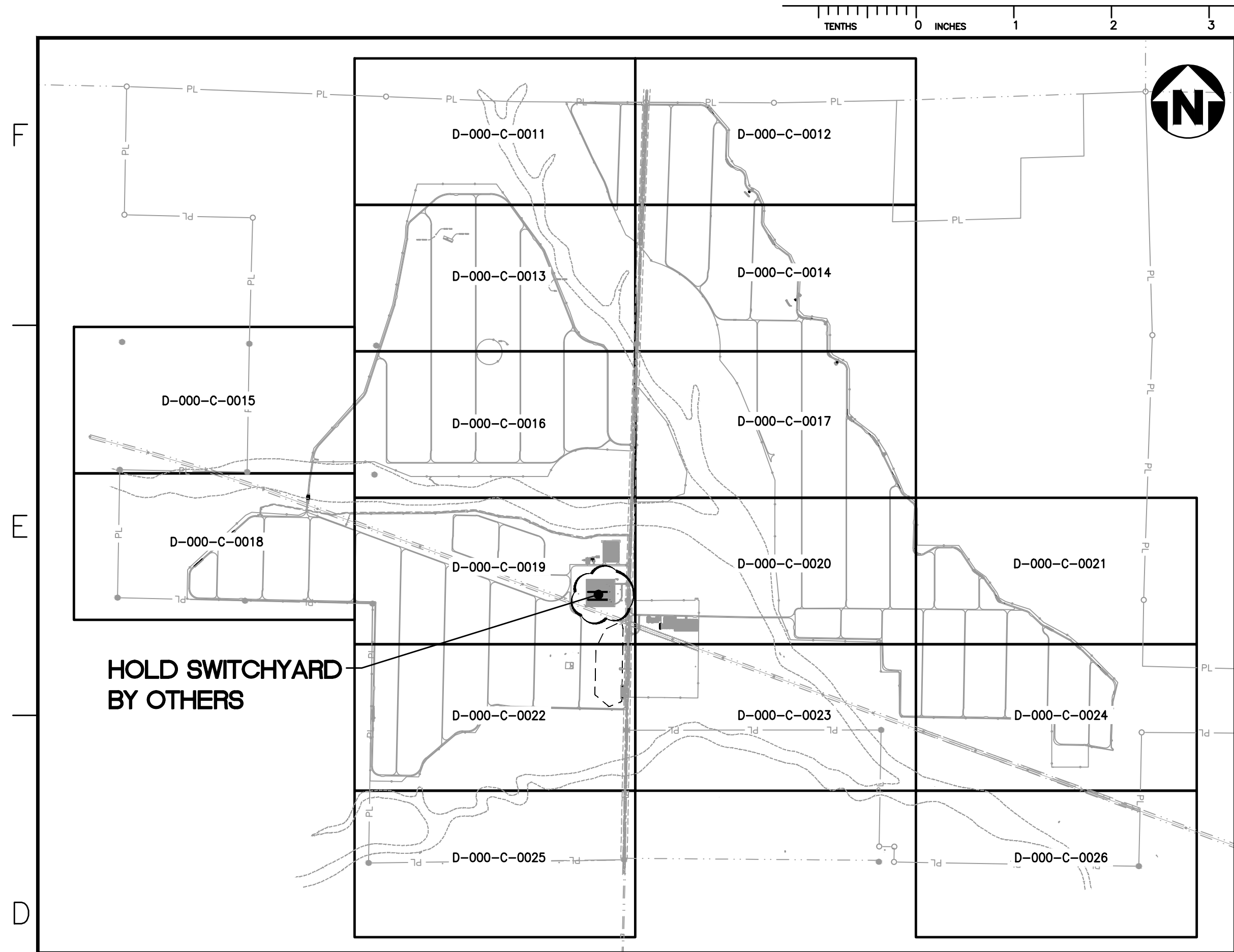
IMPROVEMENT PLANS APPROVED:  
SAN BENITO COUNTY DEPT OF PUBLIC WORKS

COUNTY ENGINEER  
(ARMAN NAZEMI C.E. 55927)

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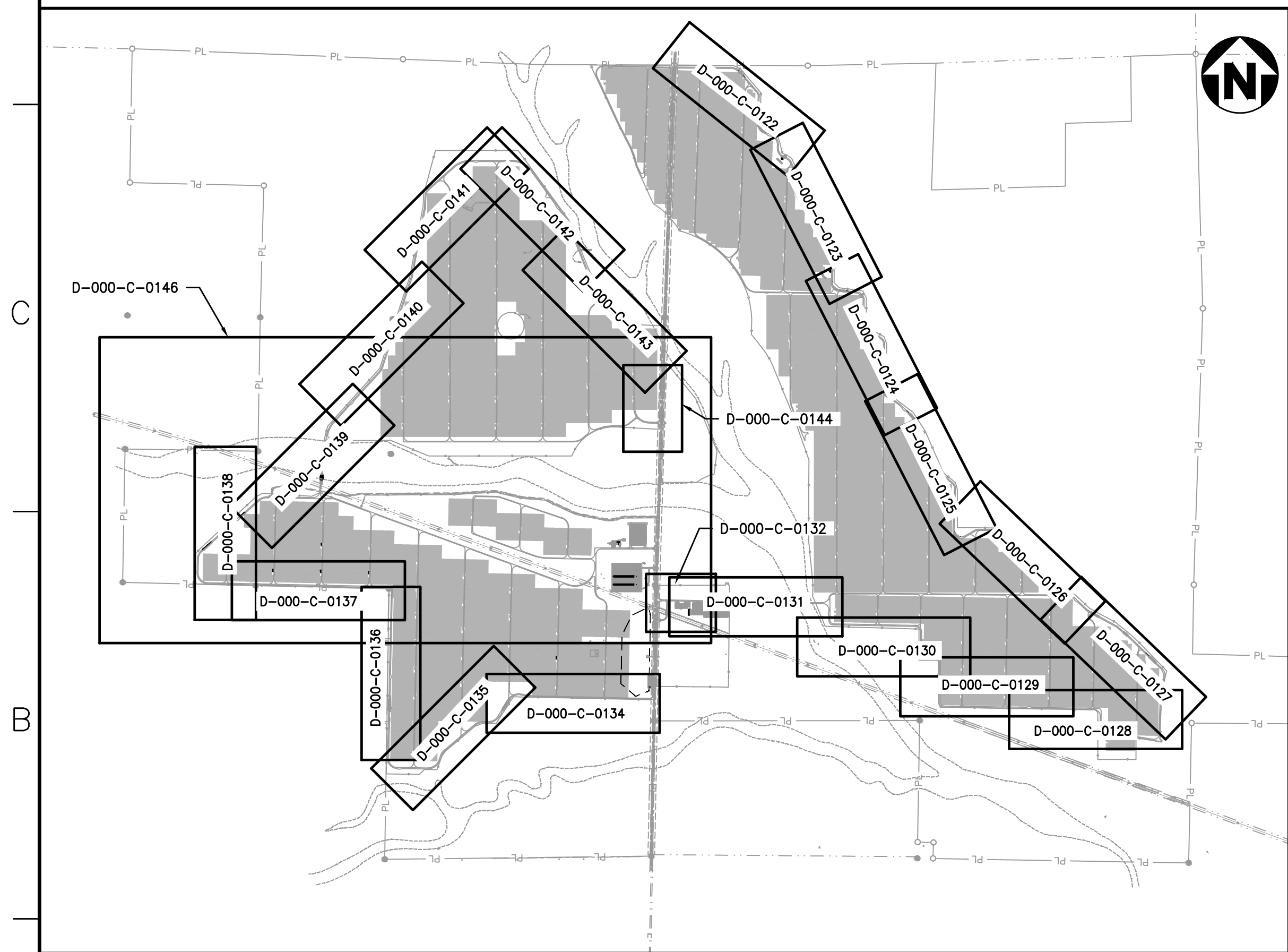




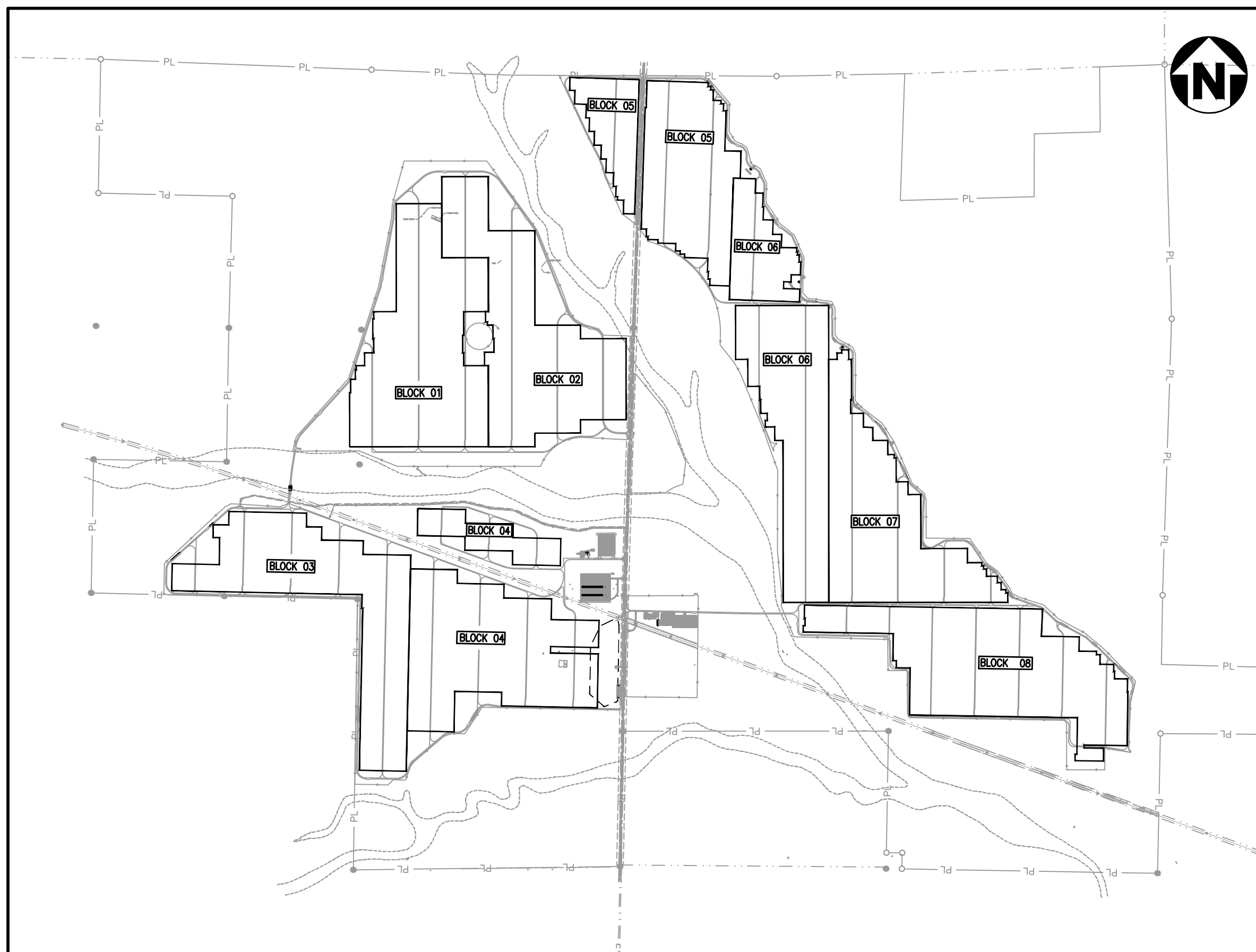
GRADING, DRAINAGE & EROSION CONTROL DRAWINGS KEY PLAN



AREA DETAIL DRAWINGS KEY PLAN



ROAD PLAN AND PROFILE DRAWINGS KEY PLAN



CONSTRUCTION AREA BLOCKS KEY PLAN

- NOTES
- FOR GENERAL NOTES, LEGEND, AND KEY PLANS SEE DRAWINGS D-000-C-0002 AND D-000-C-0003.
  - FOR SEDIMENT AND EROSION CONTROL NOTES AND DETAILS, SEE DRAWINGS D-000-C-0071 THROUGH D-000-C-0074. FOR FURTHER INFORMATION REFERENCE SWPPP REPORT, C-RPT-000-001.
  - FOR DUST CONTROL PLAN AND NOTES, SEE REPORT C-RPT-000-003.
  - FOR GENERAL DETAILS, SEE DRAWINGS D-000-C-0081 THROUGH D-000-C-0089.
  - FOR JURISDICTIONAL WATERS, OPEN CHANNELS, AND LOW WATER CROSSING DETAILS AND INFORMATION SEE DRAWINGS D-000-C-0151 THROUGH D-000-C-0190.
  - FOR PERIMETER ROAD PLAN AND PROFILES AND NEW VASQUEZ CREEK ROAD SEE DRAWINGS D-000-C-0121 THROUGH D-000-C-0146.
  - FOR ADDITIONAL SEDIMENT AND EROSION CONTROL DETAILS AND SPECIFICATIONS REFERENCE SEE CASQA CONSTRUCTION BMP HANDBOOK.
  - ALL DISTURBED AREAS NOT COVERED BY AGGREGATE OR PAVEMENT SHALL BE RE-VEGETATED, SEE RE-VEGETATION REPORT.
  - IF RE-VEGETATION OF OPEN CHANNELS AND DISTURBED AREAS HAVE NOT DEVELOPED PRIOR TO THE RAINY SEASON CONTRACTOR SHALL BE REQUIRED TO INSTALL ADDITIONAL MEASURES SUCH AS EROSION CONTROL BLANKETS, ROCK CHECK DAMS (IN OPEN CHANNELS ONLY), ROCK MULCH, RIP RAP, OR ANY OTHER APPROVED METHOD AS LISTED IN THE CASQA CONSTRUCTION BMP HANDBOOK.
  - ALL EROSION CONTROL PRODUCTS SHALL BE NON-WOVEN SUCH AS NON-WOVEN SILT FENCE, GEOTEXTILES, ETC... CONTRACTOR SHALL AVOID USE OF PLASTIC MONOFILAMENT NETTING. TIGHTLY WOVEN FIBER NETTING OR SIMILAR MATERIAL SHALL NOT BE USED FOR EROSION CONTROL OR OTHER PURPOSES AT THE PROJECT SITE TO ENSURE THAT BLUNT NOSE LEOPARD LIZARDS DO NOT BECOME ENTANGLED OR TRAPPED.
  - FOR POND 3 SEE DRAWING D-000-C-0205. FOR FURTHER INFORMATION PLEASE REFERENCE THE HYDROLOGY AND HYDRAULICS REPORTS, C-RPT-000-002 AND C-RPT-100-004.

BLOCKS AREA TABLE	
CIVIL SITE BOUNDARIES	AREA (ACRES)
Block 01	295.68
Block 02	265.12
Block 03	265.81
Block 04	330.13
Block 05 (West Section)	58.28
Block 05 (East Section)	149.75
Block 06	25.18
Block 07	203.88
Block 08	267.99
Laydown Area North	40.39
Laydown Area South	65.30
Switchyard Area	33.28
Substation	20.54

\* CIVIL SITE BOUNDARIES ARE BLOCK AREAS SHOWN UP TO PERIMETER FENCE BEYOND ELECTRICAL LIMITS.

IMPROVEMENT PLANS APPROVED:  
SAN BENITO COUNTY DEPT OF PUBLIC WORKS

COUNTY ENGINEER  
(ARMAN NAZEMI C.E. 55927)

DATE

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1"=2000'

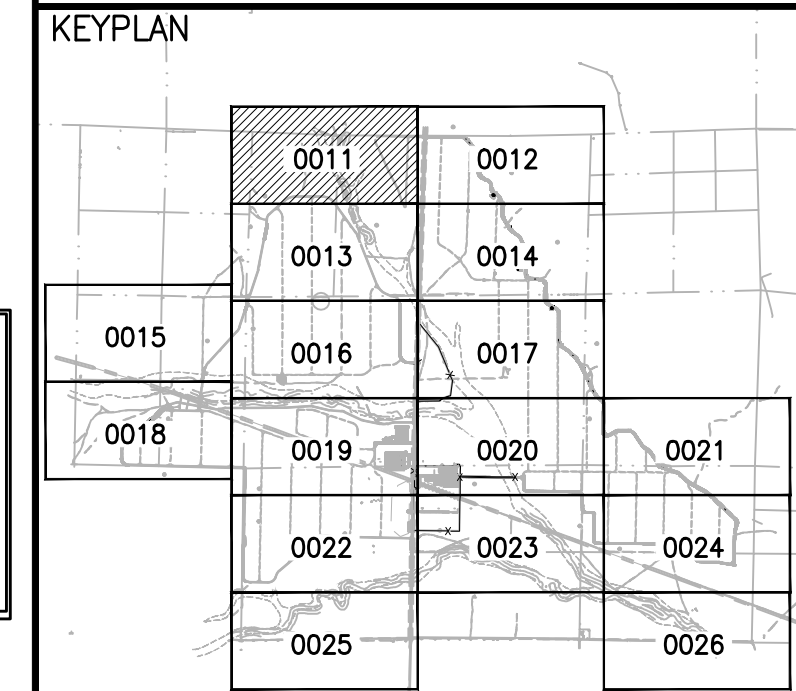
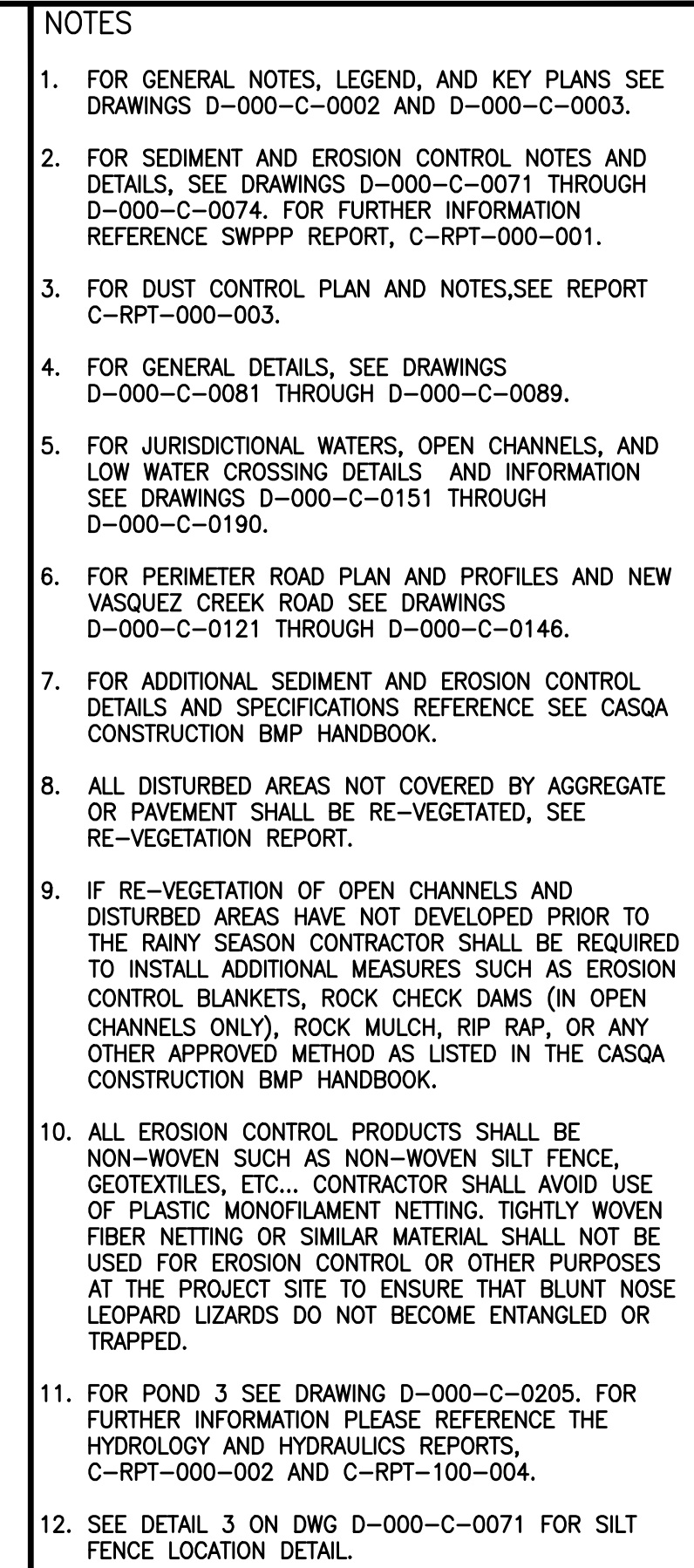
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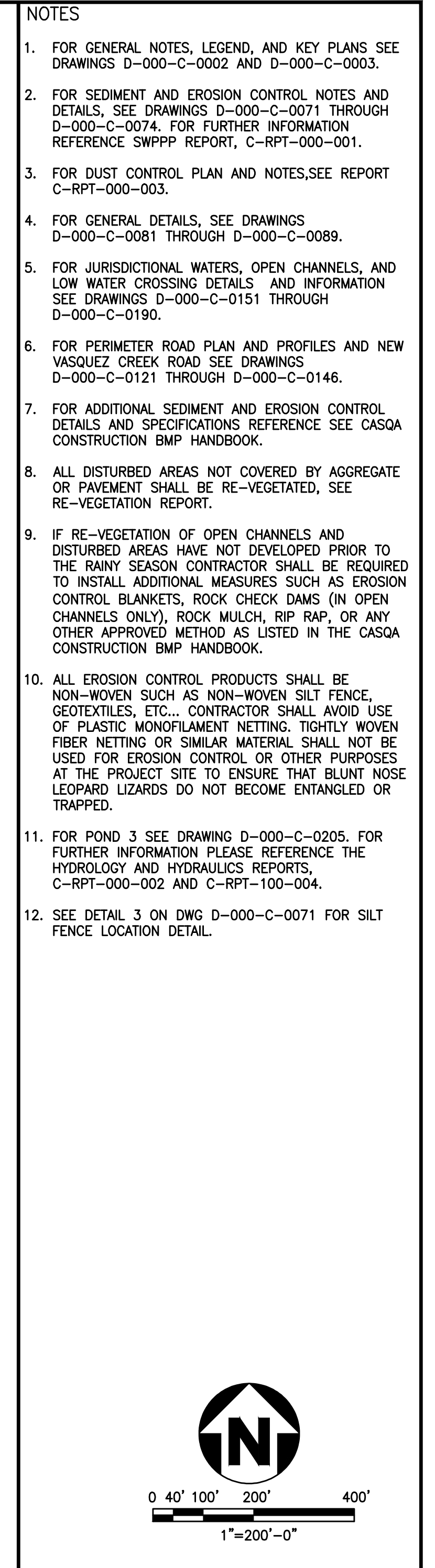


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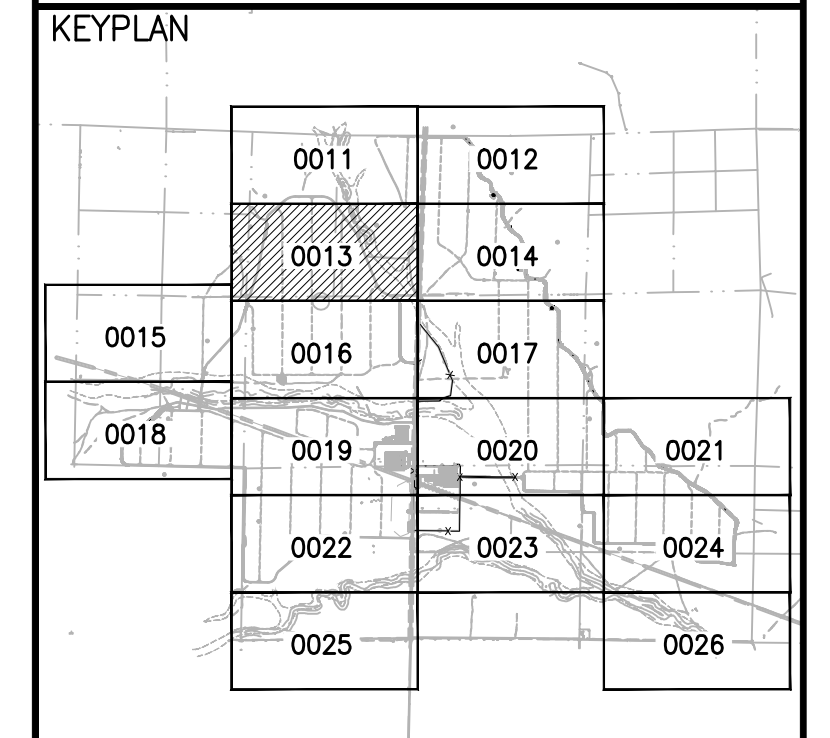
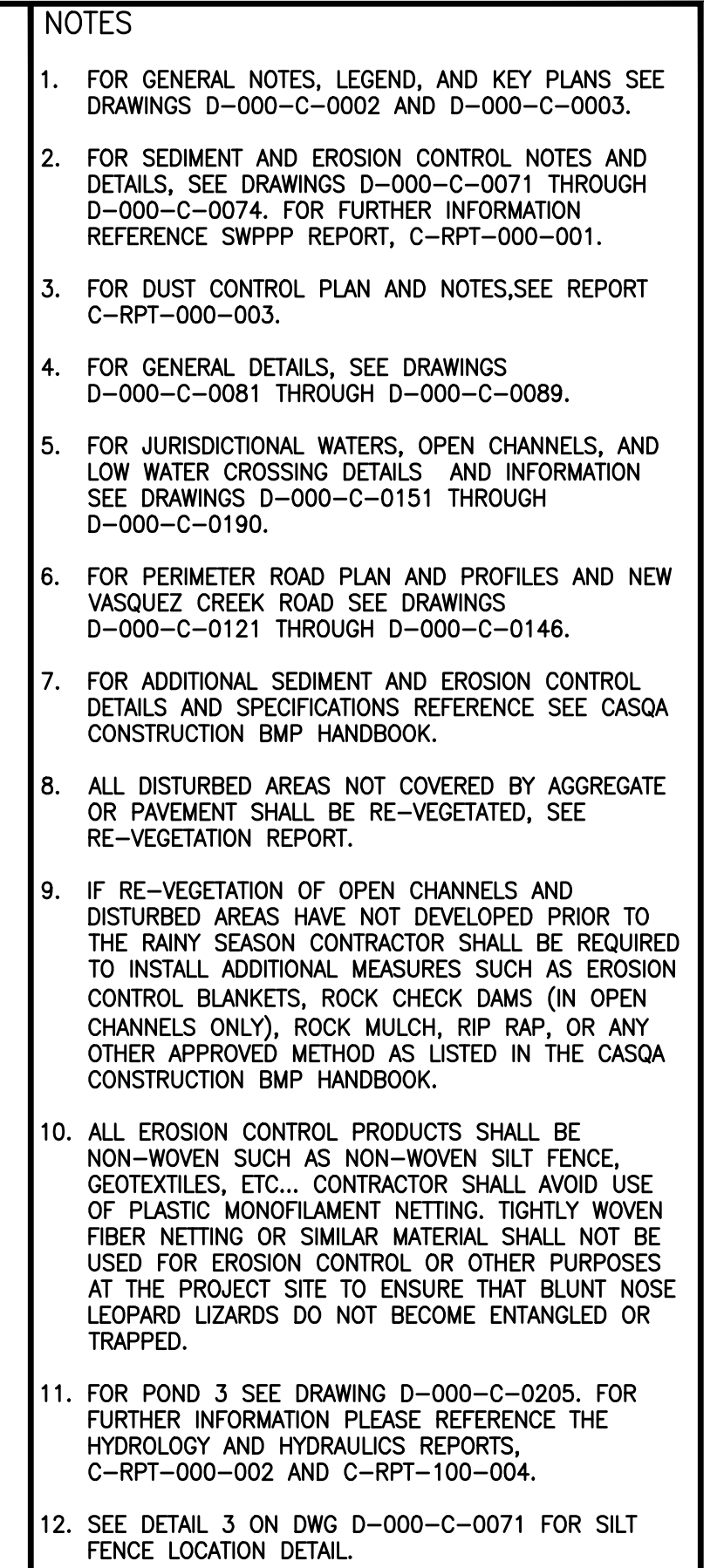
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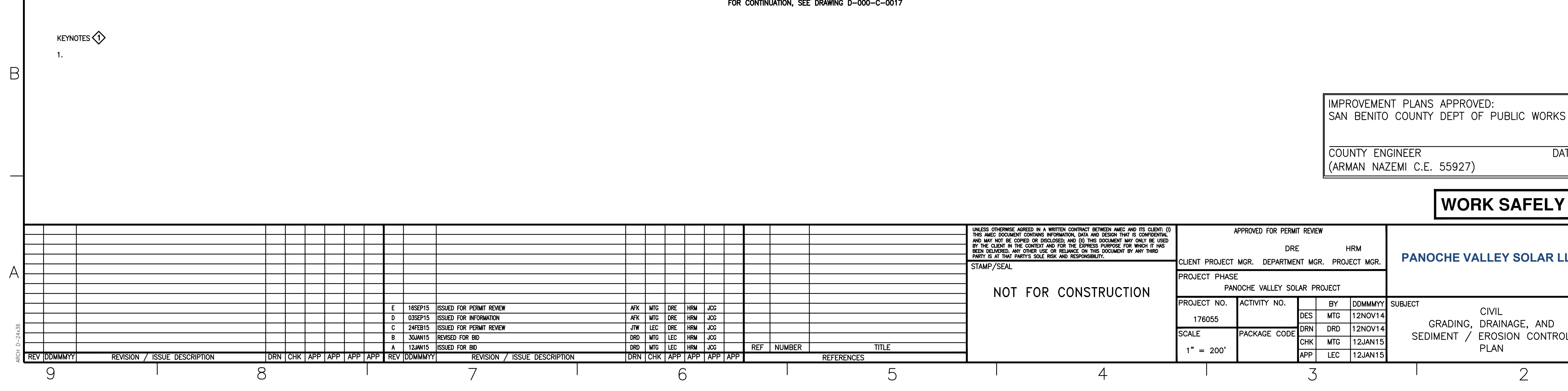
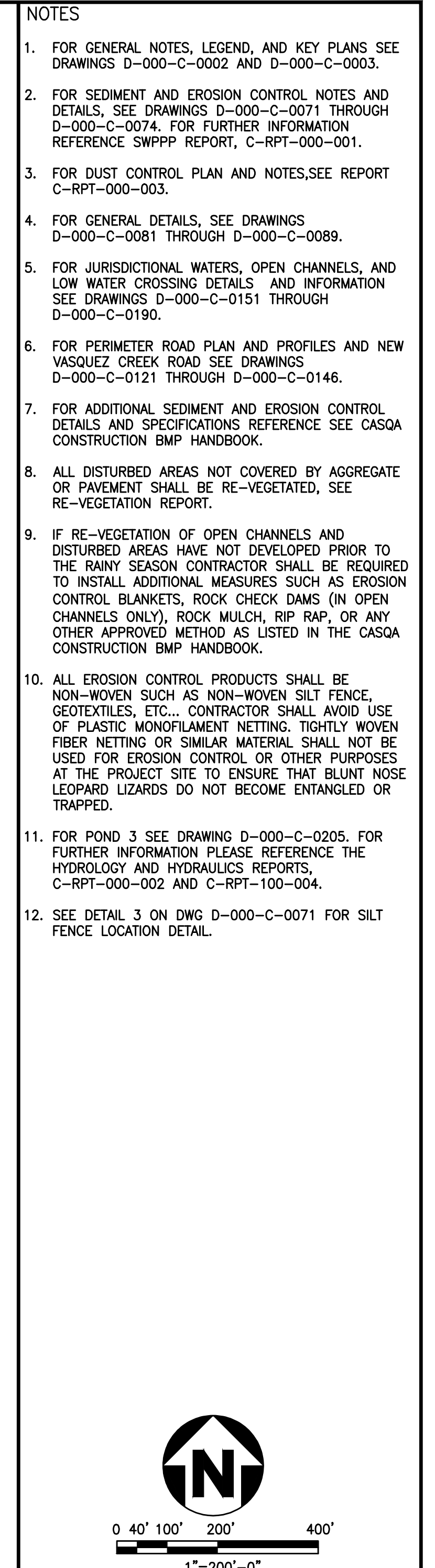




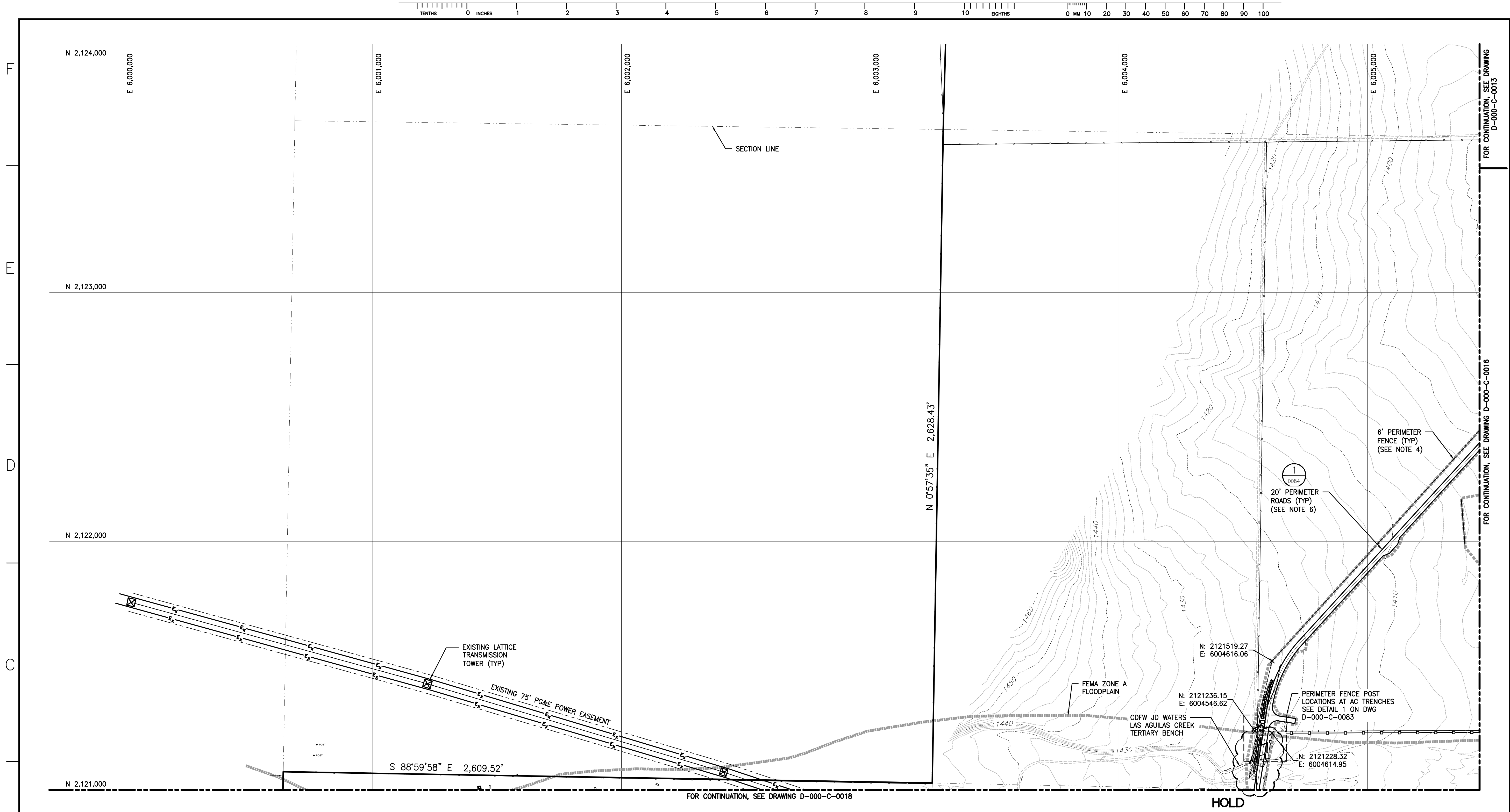
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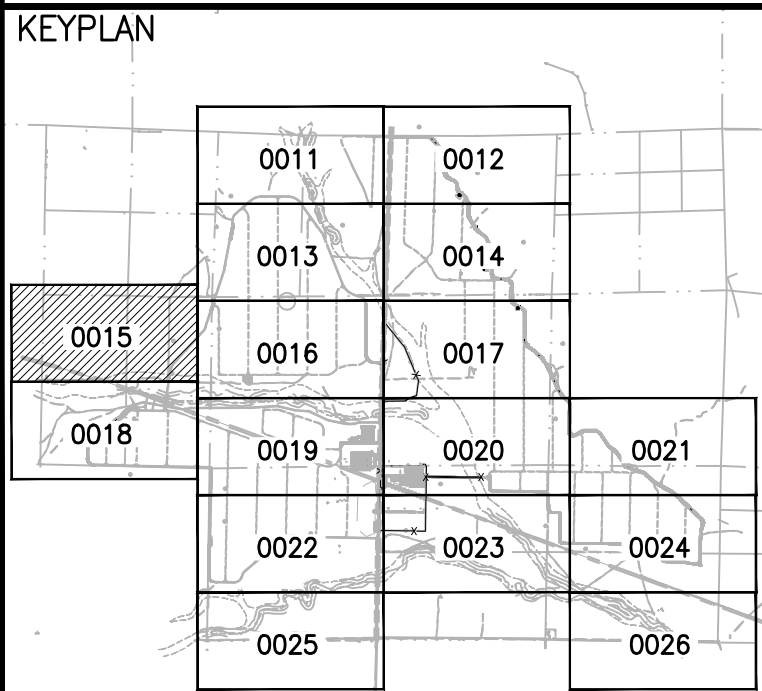
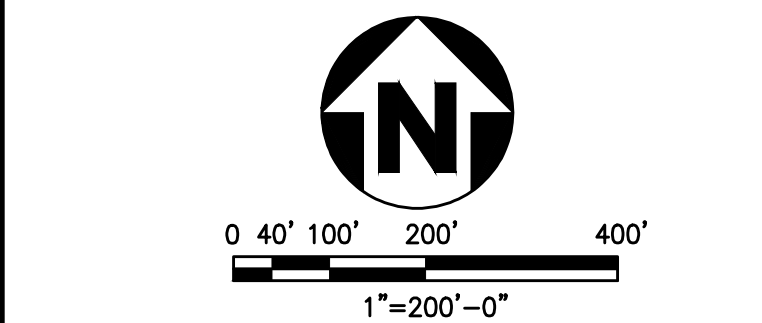








- NOTES
- FOR GENERAL NOTES, LEGEND, AND KEY PLANS SEE DRAWINGS D-000-C-0002 AND D-000-C-0003.
  - FOR SEDIMENT AND EROSION CONTROL NOTES AND DETAILS, SEE DRAWINGS D-000-C-0071 THROUGH D-000-C-0074. FOR FURTHER INFORMATION REFERENCE SWPPP REPORT, C-RPT-000-001.
  - FOR DUST CONTROL PLAN AND NOTES,SEE REPORT C-RPT-000-003.
  - FOR GENERAL DETAILS, SEE DRAWINGS D-000-C-0081 THROUGH D-000-C-0089.
  - FOR JURISDICTIONAL WATERS, OPEN CHANNELS, AND LOW WATER CROSSING DETAILS AND INFORMATION SEE DRAWINGS D-000-C-0151 THROUGH D-000-C-0190.
  - FOR PERIMETER ROAD PLAN AND PROFILES AND NEW VASQUEZ CREEK ROAD SEE DRAWINGS D-000-C-0121 THROUGH D-000-C-0146.
  - FOR ADDITIONAL SEDIMENT AND EROSION CONTROL DETAILS AND SPECIFICATIONS REFERENCE SEE CASQA CONSTRUCTION BMP HANDBOOK.
  - ALL DISTURBED AREAS NOT COVERED BY AGGREGATE OR PAVEMENT SHALL BE RE-VEGETATED, SEE RE-VEGETATION REPORT.
  - IF RE-VEGETATION OF OPEN CHANNELS AND DISTURBED AREAS HAVE NOT DEVELOPED PRIOR TO THE RAINY SEASON CONTRACTOR SHALL BE REQUIRED TO INSTALL ADDITIONAL MEASURES SUCH AS EROSION CONTROL BLANKETS, ROCK CHECK DAMS (IN OPEN CHANNELS ONLY), ROCK MULCH, RIP RAP, OR ANY OTHER APPROVED METHOD AS LISTED IN THE CASQA CONSTRUCTION BMP HANDBOOK.
  - ALL EROSION CONTROL PRODUCTS SHALL BE NON-WOVEN SUCH AS NON-WOVEN SILT FENCE, GEOTEXTILES, ETC... CONTRACTOR SHALL AVOID USE OF PLASTIC MONOFILAMENT NETTING. TIGHTLY WOVEN FIBER NETTING OR SIMILAR MATERIAL SHALL NOT BE USED FOR EROSION CONTROL OR OTHER PURPOSES AT THE PROJECT SITE TO ENSURE THAT BLUNT NOSE LEOPARD LIZARDS DO NOT BECOME ENTANGLED OR TRAPPED.
  - FOR POND 3 SEE DRAWING D-000-C-0205. FOR FURTHER INFORMATION PLEASE REFERENCE THE HYDROLOGY AND HYDRAULICS REPORTS, C-RPT-000-002 AND C-RPT-100-004.
  - SEE DETAIL 3 ON DWG D-000-C-0071 FOR SILT FENCE LOCATION DETAIL.




KEYNOTES

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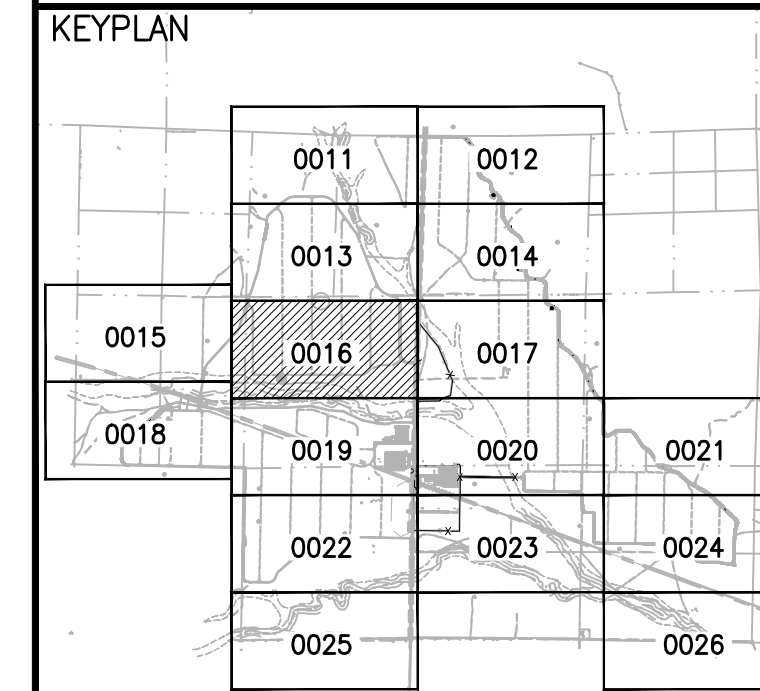
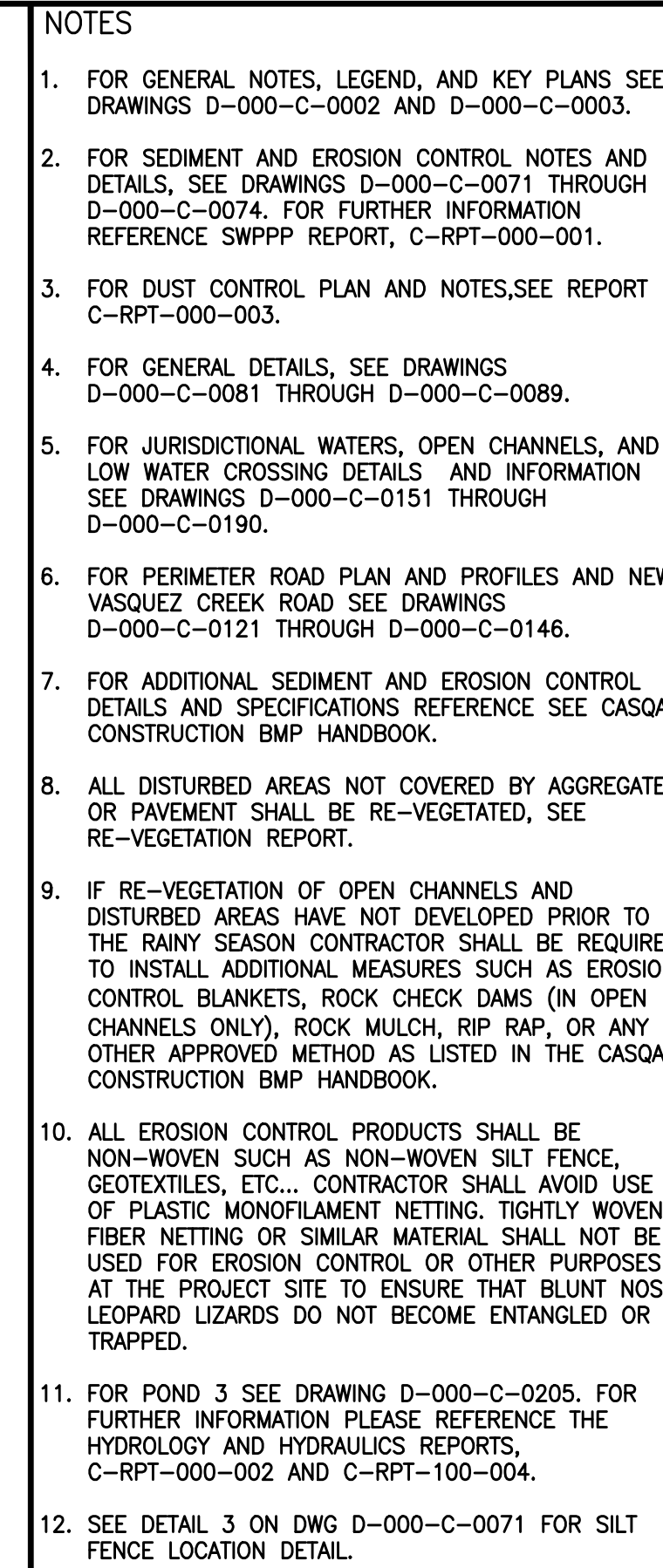
IMPROVEMENT PLANS APPROVED:  
SAN BENITO COUNTY DEPT OF PUBLIC WORKS

COUNTY ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_  
(ARMAN NAZEMI C.E. 55927)

**WORK SAFELY**

																				UNLESS OTHERWISE AGREED IN A WRITTEN CONTRACT BETWEEN AMEC AND ITS CLIENT: (i) THIS AMEC DOCUMENT CONTAINS INFORMATION, DATA AND DESIGN THAT IS CONFIDENTIAL AND MAY NOT BE COPIED OR DISCLOSED; AND (ii) THIS DOCUMENT MAY ONLY BE USED BY THE CLIENT IN THE CONTEXT AND FOR THE EXPRESS PURPOSE FOR WHICH IT HAS BEEN DELIVERED. ANY OTHER USE OR RELIANCE ON THIS DOCUMENT BY ANY THIRD PARTY IS AT THAT PARTY'S SOLE RISK AND RESPONSIBILITY.										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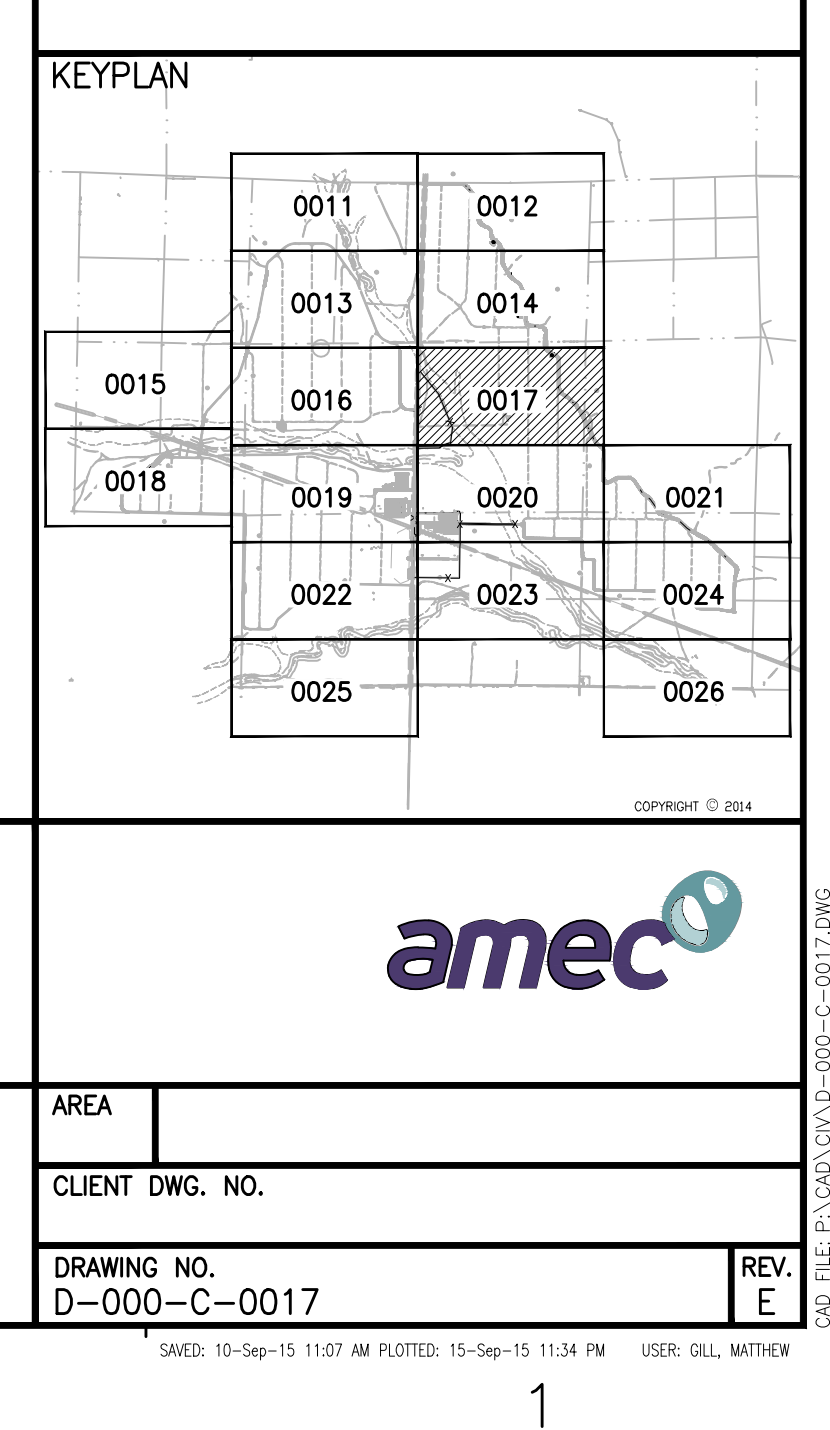
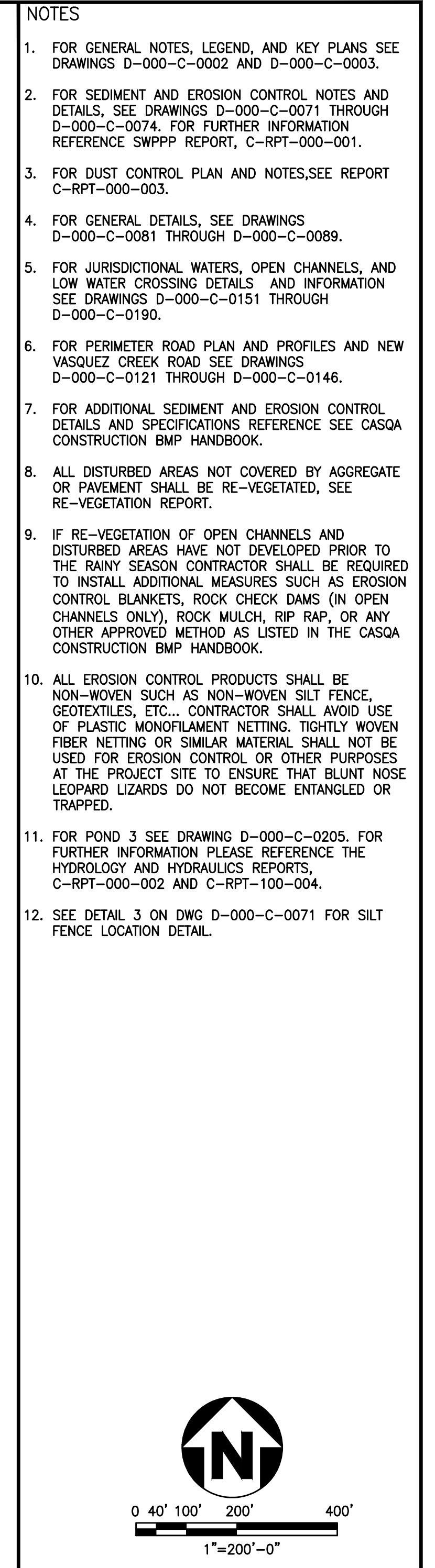




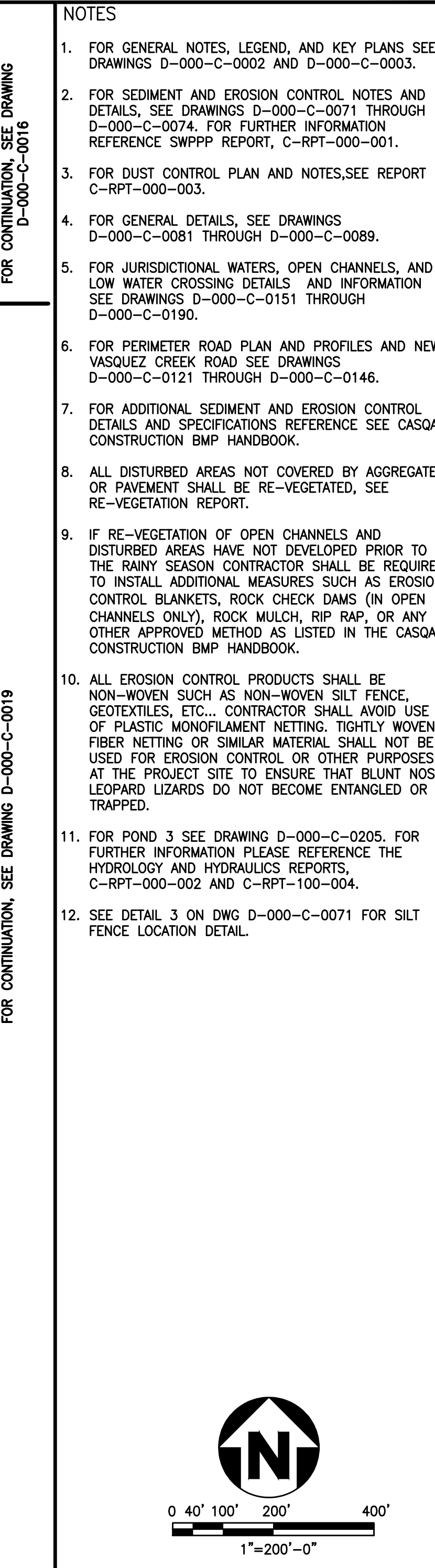
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**KEYPLAN**

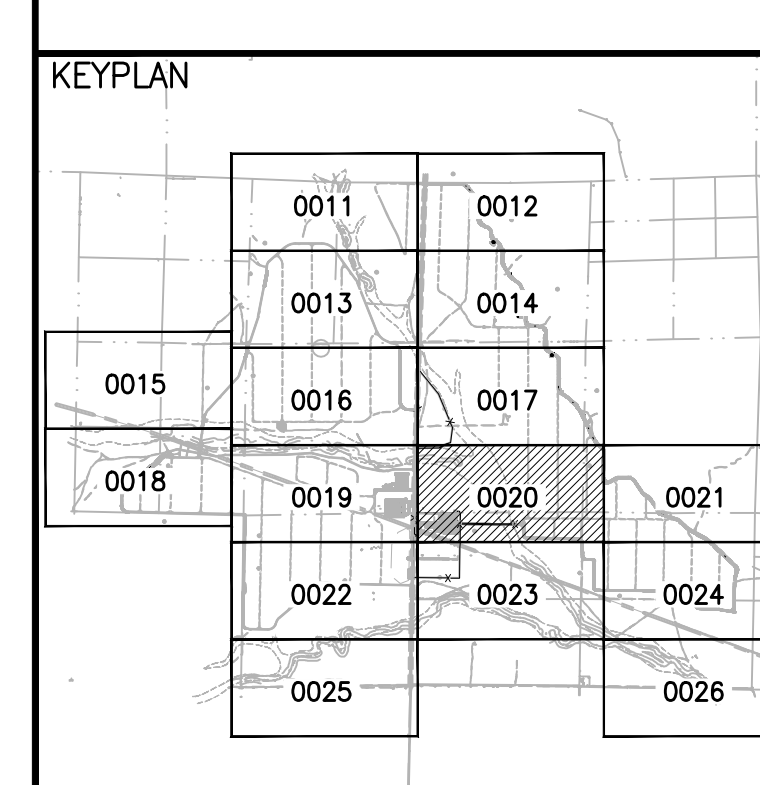
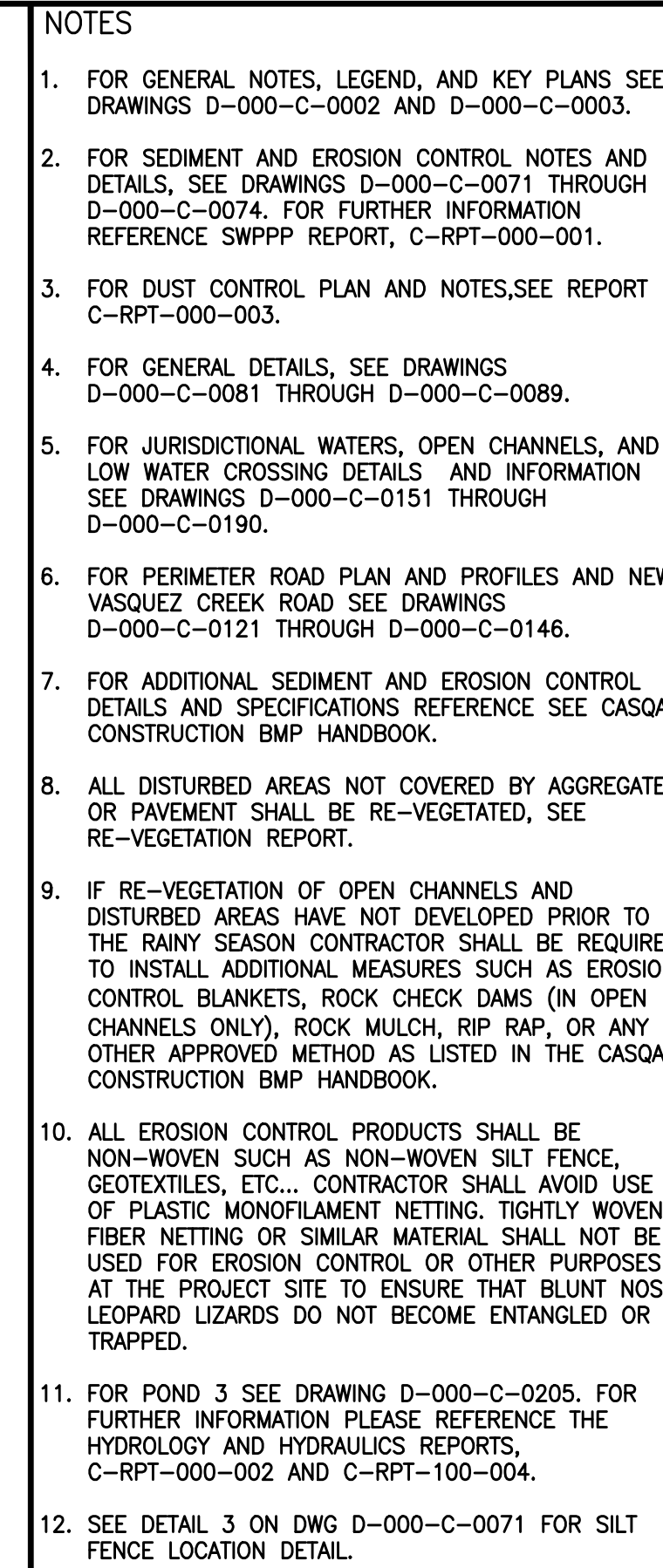
Diagram showing a grid of rooms numbered 0011 to 0026. Room 0018 is shaded with diagonal lines. A small grey rectangle is located between rooms 0019 and 0020. The diagram includes a north arrow pointing towards the top right and a scale bar at the bottom right.

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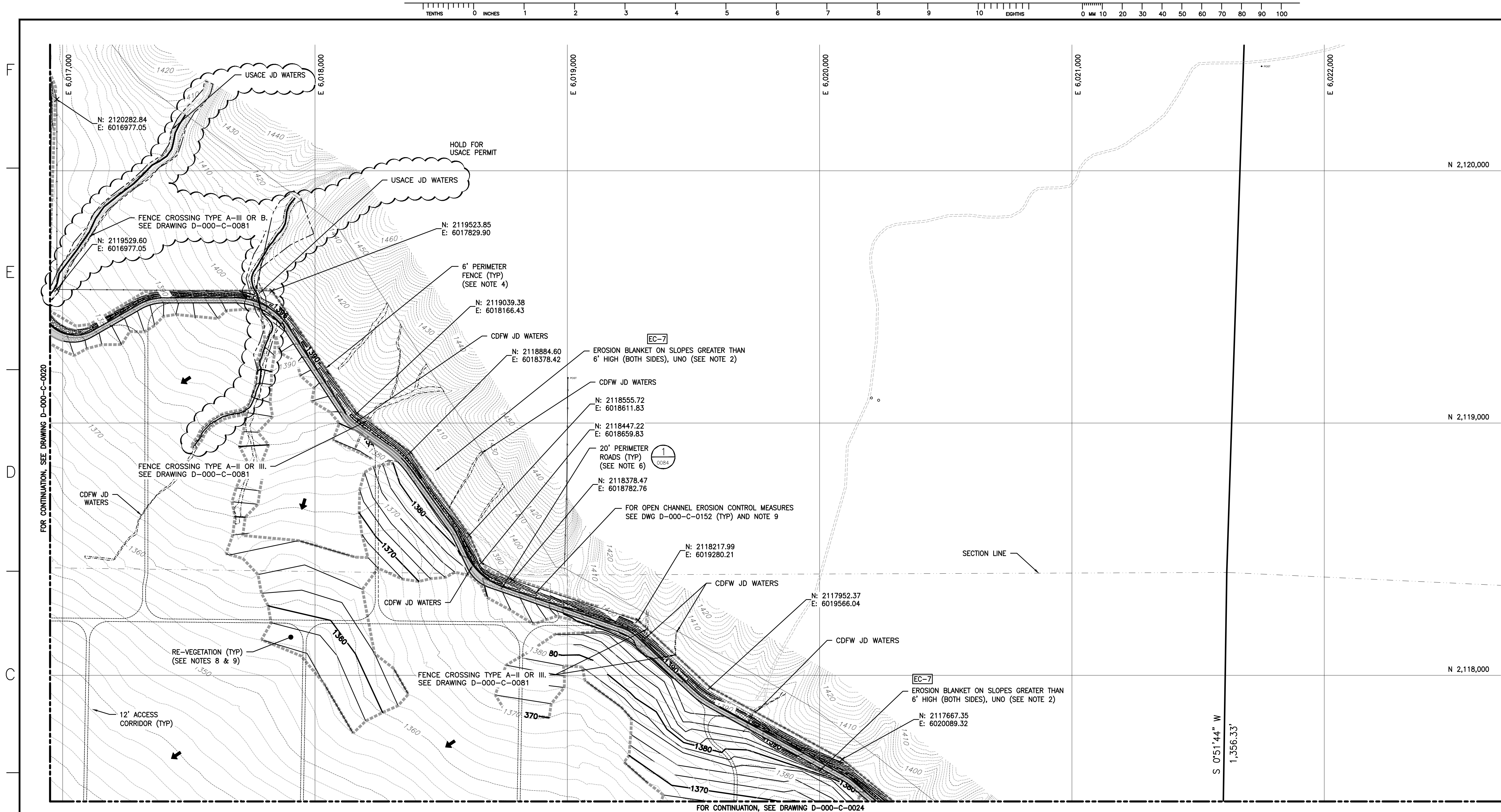




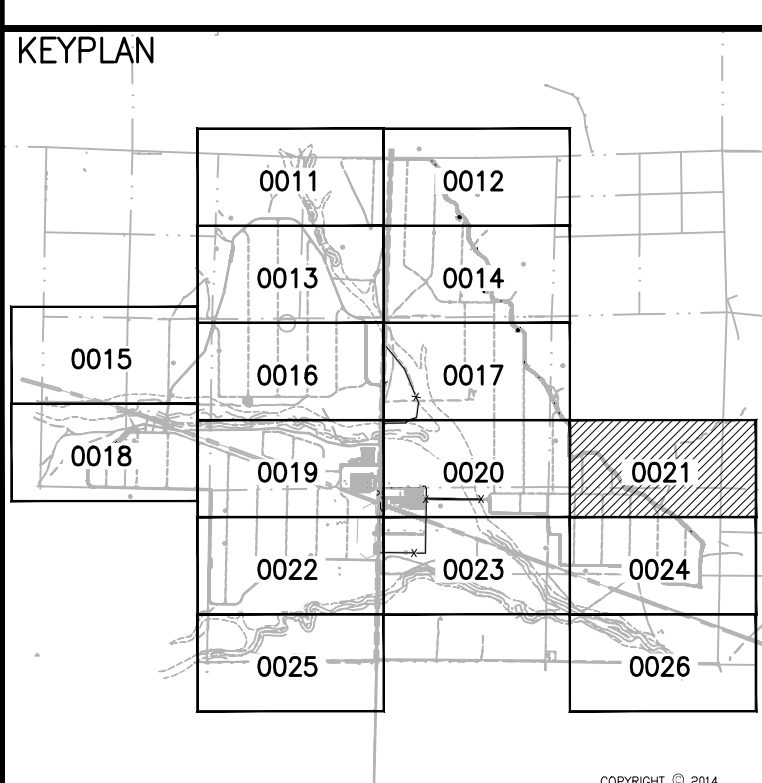
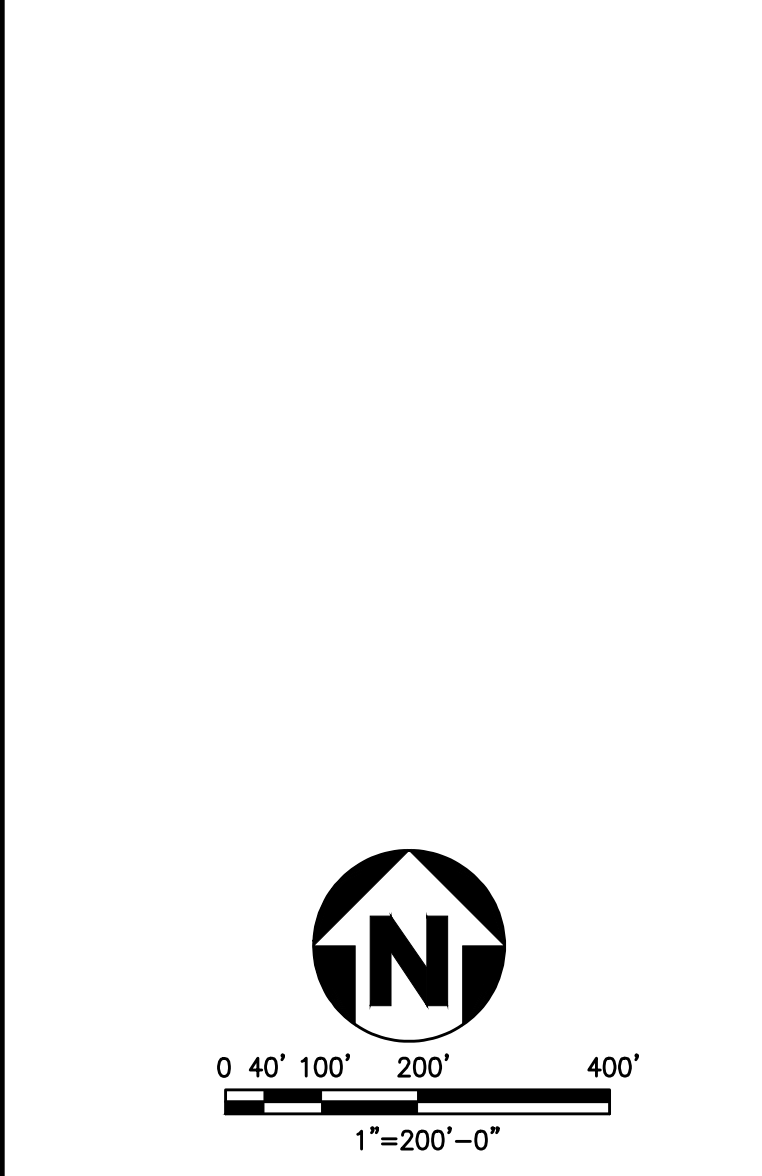
## WORK SAFELY

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- NOTES
1. FOR GENERAL NOTES, LEGEND, AND KEY PLANS SEE DRAWINGS D-000-C-0002 AND D-000-C-0003.
  2. FOR SEDIMENT AND EROSION CONTROL NOTES AND DETAILS, SEE DRAWINGS D-000-C-0071 THROUGH D-000-C-0074. FOR FURTHER INFORMATION REFERENCE SWPPP REPORT, C-RPT-000-001.
  3. FOR DUST CONTROL PLAN AND NOTES, SEE REPORT C-RPT-000-003.
  4. FOR GENERAL DETAILS, SEE DRAWINGS D-000-C-0081 THROUGH D-000-C-0089.
  5. FOR JURISDICTIONAL WATERS, OPEN CHANNELS, AND LOW WATER CROSSING DETAILS AND INFORMATION SEE DRAWINGS D-000-C-0151 THROUGH D-000-C-0190.
  6. FOR PERMETER ROAD PLAN AND PROFILES AND NEW VASQUEZ CREEK ROAD SEE DRAWINGS D-000-C-0121 THROUGH D-000-C-0146.
  7. FOR ADDITIONAL SEDIMENT AND EROSION CONTROL DETAILS AND SPECIFICATIONS REFERENCE SEE CASQA CONSTRUCTION BMP HANDBOOK.
  8. ALL DISTURBED AREAS NOT COVERED BY AGGREGATE OR PAVEMENT SHALL BE RE-VEGETATED, SEE RE-VEGETATION REPORT.
  9. IF RE-VEGETATION OF OPEN CHANNELS AND DISTURBED AREAS HAVE NOT DEVELOPED PRIOR TO THE RAINY SEASON CONTRACTOR SHALL BE REQUIRED TO INSTALL ADDITIONAL MEASURES SUCH AS EROSION CONTROL BLANKETS, ROCK CHECK DAMS (IN OPEN CHANNELS ONLY), ROCK MULCH, RIP RAP, OR ANY OTHER APPROVED METHOD AS LISTED IN THE CASQA CONSTRUCTION BMP HANDBOOK.
  10. ALL EROSION CONTROL PRODUCTS SHALL BE NON-WOVEN SUCH AS NON-WOVEN SILT FENCE, GEOTEXTILES, ETC... CONTRACTOR SHALL AVOID USE OF PLASTIC MONOFILAMENT NETTING. TIGHTLY WOVEN FIBER NETTING OR SIMILAR MATERIAL SHALL NOT BE USED FOR EROSION CONTROL OR OTHER PURPOSES AT THE PROJECT SITE TO ENSURE THAT BLUNT NOSE LEOPARD LIZARDS DO NOT BECOME ENTANGLED OR TRAPPED.
  11. FOR POND 3 SEE DRAWING D-000-C-0205. FOR FURTHER INFORMATION PLEASE REFERENCE THE HYDROLOGY AND HYDRAULICS REPORTS, C-RPT-000-002 AND C-RPT-100-004.
  12. SEE DETAIL 3 ON DWG D-000-C-0071 FOR SILT FENCE LOCATION DETAIL.



IMPROVEMENT PLANS APPROVED:  
SAN BENITO COUNTY DEPT OF PUBLIC WORKS

COUNTY ENGINEER  
(ARMAN NAZEMI C.E. 55927)

DATE

**WORK SAFELY**

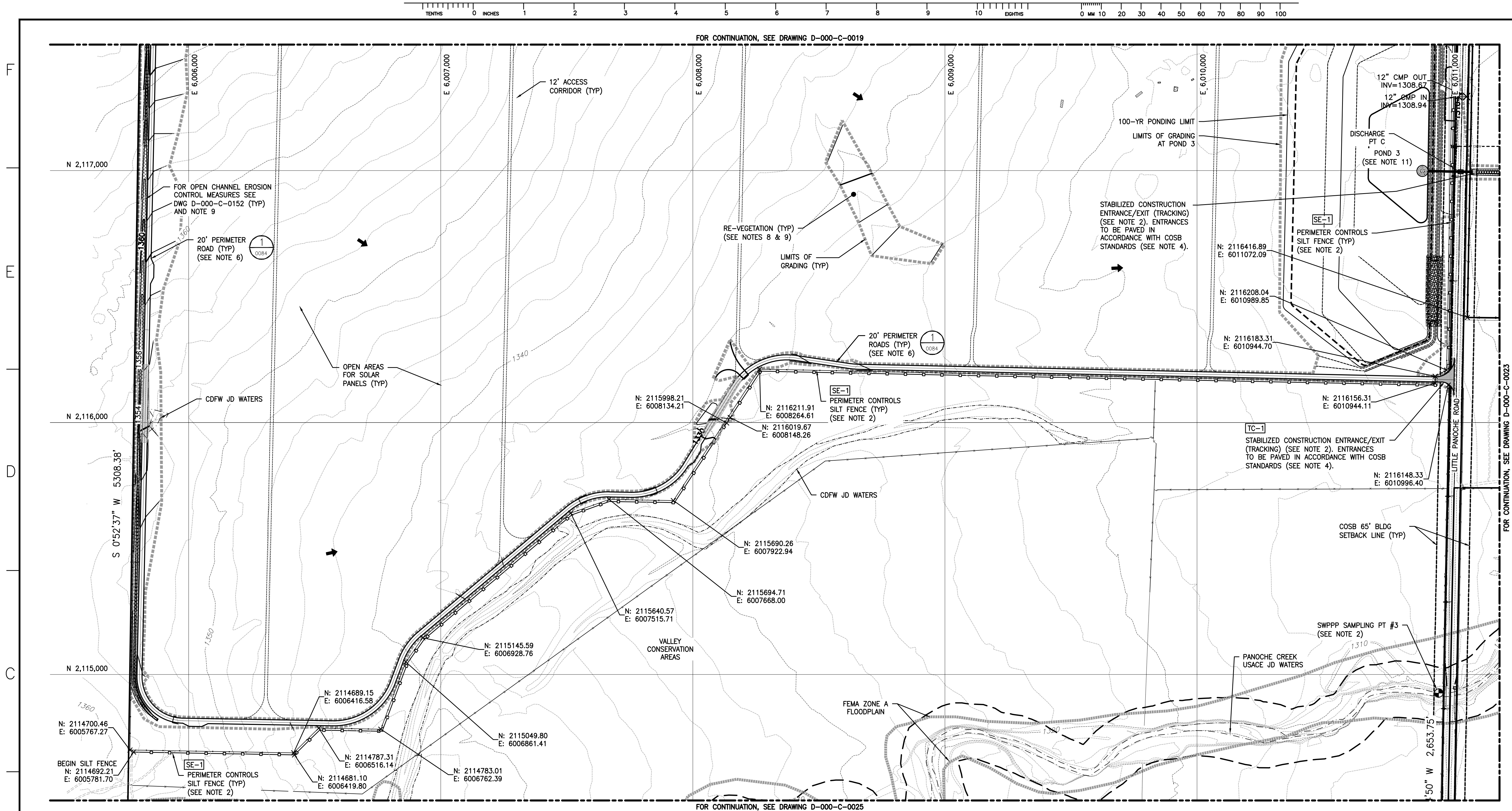
- KEYNOTES
- 1.

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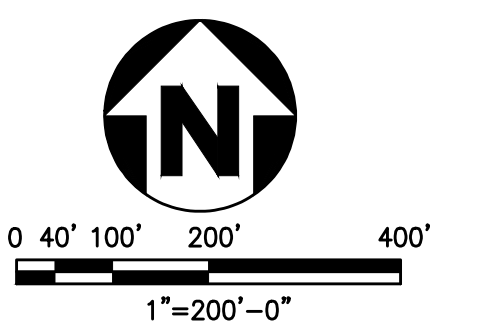
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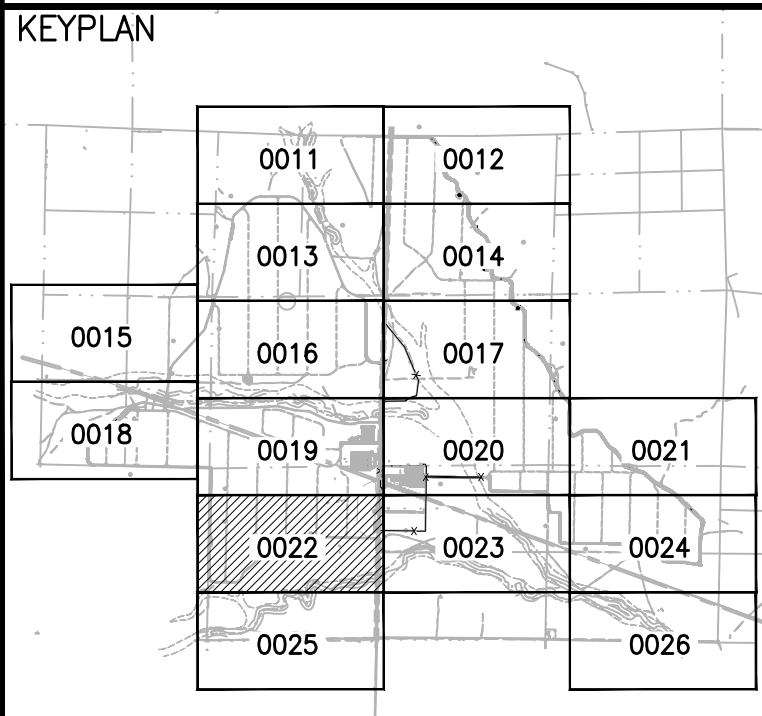
KEYNOTES

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IMPROVEMENT PLANS APPROVED:  
SAN BENITO COUNTY DEPT OF PUBLIC WORKS

COUNTY ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_  
(ARMAN NAZEMI C.E. 55927)

**WORK SAFELY**



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